

# FLIGHT

&  
The AIRCRAFT  
ENGINEER.

First Aero Weekly in the World.

Founder and Editor: STANLEY SPOONER.

A Journal devoted to the Interests, Practice, and Progress of Aerial Locomotion and Transport.

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## EDITORIAL COMMENT.

**I**N our correspondence columns we publish a letter from a Squadron Commander in the R.N.A.S. on the subject of our article in "FLIGHT" of September 20th, dealing with "Airmen and Life Assurance." We fear our correspondent has mistaken the incidence of our remarks, which were not intended to deal in any shape or form with the risks of peace flying, but were solely directed to the question of the uninsurable risks of flying in the face of the enemy. Our article was based, as our correspondent will see if he refers back to it, on the statement of a father that he had endeavoured to secure a policy on the life of his son, an officer in the R.F.C., but that no insurance company would look at the business. That being so, we do not agree that our remarks were at variance with the "repeated assurances of many of our public men that 'flying is now as safe as motoring,' " a statement

that our correspondent is perfectly correct in describing as having received our own endorsement and approval.

He asks the direct question, "Taking peace flying only, are the lives of our airmen really uninsurable?" The answer to that is, "Certainly not." As a matter of fact, from the point of view of an insurance company, the risks attendant on peace flying have been so reduced by the immeasurable improvements that have been made in machines and engines that they are really far less than those incurred by those engaged in many of what are described as "extra hazardous" occupations, but whose lives are nevertheless insured willingly by every life insurance company in the world. When we come to the consideration of war risks, however, the matter begins to bear a totally different complexion. We do not know exactly—or even approximately—what the ratio of loss is to the mileage flown or to the number of pilots employed on active service, but it appears to be high enough to deter insurance companies from courting the risk on anything which could be called a business basis. That was the text of our article.

In the light of the explanation we have given above there does not seem to be any real conflict of opinion between our correspondent and ourselves. With the rest of his letter we agree entirely, the more so as we think his suggestion that the Government should, in confidence, supply the leading insurance companies with the true statistics of flying accidents, an admirable one. As he points out, the great trouble that has to be surmounted in the matter is the absolute lack of reliable data. We know exactly how many fatal accidents occur in normal times, but what no one does know is their precise proportion to the number of miles flown. We do know that the proportion is quite a small one, but that is much too nebulous a basis upon which to do business. After the war there will be an enormous extension of commercial aviation, which will mean that there will arise at the same time a corresponding demand for insurance of risks of pilots, passengers and even goods conveyed by air. If the Government will cause the necessary statistics to be prepared and submitted to the insurance companies, the latter will be reasonably well equipped for beginning the business at once. Otherwise, it will require one or two years of careful observation and collation of mileage and accident

statistics to furnish a working basis, a condition which would be bound to exercise a retarding influence on development. Besides, there is the immediate question of insurance of our airmen who may not be directly engaged in the war so far as actual contact with the enemy is concerned. If such statistics were prepared as suggested, we doubt not the insurance companies would find it possible to undertake the risks at premiums which would make business not only possible but profitable to everybody concerned.

#### Germany and the Air.

A valued correspondent sends us a translation, from the Berlin paper *Der Motorwagen*, of the report of a recent meeting of the German Aerial League. The latter is, and always has been, a very live body indeed—as live as the German Navy League—and it may be taken, therefore, that the report in question represents quite accurately the views and beliefs of that very large section of the German people which thinks ahead and is convinced that air power will decide the future of empires. The translation is as follows:—

"At a recent meeting of the 'Deutscher Fliagerbund,' or German Aerial League, the treasurer, Lieut. Bothe, of Berlin, gave some interesting details regarding the objects and activities of the League.

"He first gave a very clear and comprehensive survey of the present position of aeronautics in Germany, claiming that the Germans had now really obtained the supremacy of the air on the Western Front as on other fronts, though he had to acknowledge that at the time of the great Somme offensive the mastery in the air belonged to the British and French.

"This led to a reawakening in German military circles and to a redoubling of their efforts to regain that supremacy, and no stones were left unturned until that object had been successfully attained.

"The Germans had now left their adversaries far behind, both in the number and quality of the aircraft being turned out, as the English were learning to their cost.

"Lieut. Bothe then dealt at some length with the position of military aeronautics after the present war. He foretold that on the cessation of the present hostilities all the nations would at once proceed to build up an impenetrable series of modern defensive works, extending several miles behind their frontiers, and which it would be beyond the power of human beings to break through, except by the aerial arm.

"In future wars it would be necessary to invade the enemy's territories by means of tens of thousands of aeroplanes, which by dropping hundreds of tons of explosives would destroy all industrial works, transport routes, &c., and thus delay the advance of the troops and impede preparations for offence or defence.

"The war would be won within the first few days of the declaration of hostilities by the Power or Powers which were thus able to throw in the largest weight of aerial 'frightfulness,' and thereby paralyse the fighting efficiency of its opponents, before even a battle had been fought or a campaign opened.

"Where, it may be asked, are to be found the pilots to man these tens of thousands of aeroplanes? This would be one of the chief duties of the 'German Aerial League,' an institution which was daily growing in importance and influence.

"By suitable courses of training at aerodromes and in the workshops, the youth of the country would be prepared for later service in the Flying Corps.

"The speaker urged everyone interested in this subject to give the League all the support possible by joining a local branch and by making its objects more widely known."

The first point that stands out is the obvious belief that Germany has definitely secured the supremacy of the air on all fronts. It is quite clear that this belief is genuinely held by the enemy public, since it has received confirmation in the Reichstag itself, where Herr Kaempfe, the other day said: "In the air also we have gained the supremacy." Against that,

it is claimed for the Allies that in the West and on the Italian Front the boot is on the other leg, and the claim is certainly borne out by the official reports issued from time to time on the work of our own and the French and Italian Air Services. That the enemy succeeds in raiding our shores does not affect the question at all so far as actual fighting supremacy is concerned, and he is welcome to what consolation he can derive in the meantime from the exploits of his Gothas in their utterly futile raids on London and the British coast towns.

The next point of importance that emerges is that the thoughts of the Teuton are manifestly still on war and preparation for war with its ultimate aim of a German world dominion. There is not a word in the report on the possibilities of peaceful aerial expansion for the ends of commerce. On the contrary, it is war—war all the time that appears to obscess the minds of this extraordinary people. If there were no other incentive to the Allies to prosecute the war until the last vestiges of Prussian militarism have been ground into the dust, it would be supplied by the utterances of Germany's public men. So far from having renounced their schemes of world conquest, it is abundantly clear that though they recognise they have failed to attain their objectives by one method they are still busy thinking out schemes for reaching them by another route. Germany has never been an agreeable member of the comity of nations and never will be. There is only one manner of rendering the poisonous snake harmless, and that is by drawing its fangs. When Germany's have been drawn it will be possible for decent people to live in the same world, but, to pursue the simile, we shall have to watch the mouth of the snake lest they grow again.

A nation that has thought war and dreamed war for more than half a century cannot change its ideals all at once, even though it be brought to see that it has worshipped false gods. It will change the outward seeming of those gods, but they will be the same gods. How Germany has worshipped the War God in the past we know, and we hardly wanted to drive home the realisation of her true character, the revelation of the United States State Department of the statement made to Admiral Dewey by the Hun Admiral Goetz of her intention to launch a world war somewhere about the year 1913. That she still worships at the same shrine is amply shown by all the contemporary evidence relating to the feeling of all classes of Germans, of which the report we have quoted is characteristic. It carries with it a warning for our after-the-war activities, which we shall hardly be able to ignore.

#### The Raids on London.

As was anticipated by all who have followed the German method of conducting the war in the air, the brilliant moonlight nights of the past ten days have produced a plentiful crop of aerial raids on British towns, the feature of which has been the desperate attempts made by Hun airmen to reach the Metropolis. Unfortunately they have, to some extent, succeeded in that object, though the results which have attended their efforts have been by no means commensurate with the expenditure of energy involved. The sum total of their achievements in London has been that a few corners have been knocked off a very few quite unimportant buildings; a number—fortunately a small number—of inoffensive civilians





AT THE RECENT SOPWITH SPORTS AT NORBITON.—A snap of a Sopwith "Camel" during an exhibition flight.

—men, women and children—have been killed, and a somewhat larger number more or less seriously hurt; and an infinitesimal proportion of the more neuropathic of the population have had their nerves badly shaken. So far, however, as intimidating the people of London as a whole is concerned, the raids have only had the effect of steeling their determination to get on with the war and to continue getting on with it until we have put it beyond the power of the enemy, once and for all, to pursue his favourite pastime of carrying "frightfulness" to people who only desire to live in peace with the rest of a peacefully disposed world.

### Air Warfare and its Expansion.

Naturally one result of the raids has been to powerfully focus attention on the development of war in the air. Among the best reasoned comments on what, even now, we must call the new method of waging war, is that of the *Times*, which remarks in a leading article that it is absolutely vital to recognise that air warfare is capable of infinite expansion and to lose no more time in adjusting our own air policy to the conditions which confront us. Continuing, the *Times* says:—

"The naked truth about the present situation is that the Germans are continually invading these islands and menacing the capital through the air. The reply that they have not accomplished very much does not dispose of the broad principle involved. And the demand of the public is very clear and very natural. No one is content with an air policy which aims exclusively at defensive operations. An offensive policy is demanded, over and above the offensive operations conducted immediately behind the German lines on the Western front. If the Germans are constantly invading us through the air, why are we not invading Germany? The immediate reason, no doubt, is that our aeroplanes are believed to be better employed; but behind it lies the palpable fact that in the past neither the War Office nor the Admiralty have sufficiently grasped the possibilities of the new arm. Our generals and our admirals have insisted upon regarding the Air Services solely as a subsidiary arm, to be used as an auxiliary to fleets and armies. But air warfare is fast outstripping these narrow conceptions, as London again realised last night. Had the Government and the military and naval authorities abandoned their limited outlook, and realised that aircraft and airmen must become a great separate arm organised to wage extensive warfare on its own account, we should not now be hampered by any lack of aeroplanes for every purpose. The Army and the Navy would have had their air branches, but we should also have had a great air fleet capable of carrying the war into Germany. When we attain that ideal, London may again know peace at night."

This is exactly what "FLIGHT" has been preaching for years past. At one time this journal was a voice crying in the wilderness, and it has required the bitter lessons of three years of war against a desperate and scientifically equipped enemy to demonstrate the absolute truth of the arguments that have been set forth in our columns ever since the realisation of all the potentialities of the new science of aviation impelled the foundation of "FLIGHT." Now the whole Press of the country, together with the great mass of public opinion, has been converted to the view that air power matters as much, if not even more, than the sea power upon which the British Empire has stood four-square for centuries. When at last we attain to our ideal of "One Air Service; One Uniform; One Badge," coupled with far-seeing administration, we shall begin to feel that, as the *Times* itself remarks, we may again know peace at night—and by day.

### Countering the Raiders.

Undoubtedly the new defences of London have proved that they are far and away more efficient than the old. There has been a very marked improvement in the results attained even since the early September raids. The system of the "aerial barrage" has worked out fairly well in practice, and our air squadrons have been more than a little successful in breaking up the enemy formations and preventing their machines from attaining their objectives. But all these measures are merely those of passive defence, and it would be too much to ask the people of London to rest indefinitely content with a system of defence which, however effective it is now, is at best a palliative one. What is being demanded, and in no uncertain terms, is a real defence within the enemy's frontiers—the bombing of German towns.

The answer to the demand hitherto has been that our bombing machines are engaged in much more useful work than the aimless dropping of bombs on the Rhineland cities. They are being used for bombing enemy aerodromes, ammunition dumps and his communications generally, these operations being productive of direct military effect. That is a good and sufficient answer up to a point, but it ceases to be so once that point is reached and passed. In the first place, the continued aerial attacks on London compel us to keep at home large numbers of men, guns and aeroplanes, and a corresponding amount of munitionment which could otherwise be much more usefully employed at the Front. On the other hand, the strain on the enemy's resources is much smaller, since he need only temporarily detach from their normal duties at the Front a limited number of machines for raiding London and the coast towns—limited, that is, in comparison with the numbers that have to be retained here for defensive purposes. Furthermore, he is enabled to carry out his raiding operations without the necessity for keeping at home for the defence of his own country a single machine or gun. We thus get down to the ultimate argument that if we have the machines of the proper type, the true defensive lies in counter-raiding German towns as being at once the most effective point from the point of view of teaching the enemy that his game is not worth the candle and as being actually the most economical of our own resources. It seems to emerge from the very few official utterances that have been vouchsafed regarding this question of reprisals that the powers that be are actually in favour of counter-raids as the most effective deterrent, but that there are not sufficient machines available after the needs of the field armies have been fulfilled. If that is so, then a deplorable state of things is disclosed. With every desire to do justice to those who have, since the constitution of the Air Board was put on a sane and businesslike basis, given us of their best, we must say that if we have not enough machines in hand to carry the war into Germany, there ought to be. For more than three years we have had all the resources of the world at our command. Money has been poured out like water on every branch of the Service, and least of all has it been stinted in the matter of the Air Services. If, therefore, those Services are even now inadequate to the demands which it was long ago foreseen they would have to meet, someone is gravely at fault, and the dereliction should be met with the punishment it deserves. We cannot get away from the naked truth that Germany, blockaded



and cut off as she is from every source of supply save her own, can find the machines and the men to raid London night after night, while we, apparently, can find no answer that is productive of the one effect that matters. We know the magnificent work that is being done by our airmen on the other side of the Channel. We know that they are making night and day hideous for the Hun behind the battle line. We know that they have rendered at least one of his great aerodromes—that at Ghisteltes—untenable for him. That is excellent, we agree, but the outstanding fact remains that German aeroplanes are able to cultivate the habit of nightly visits to the heart of the Empire and to get away with practical impunity. To the last we attach very little importance, since our own airmen enjoy the same immunity from loss in their night bombing expeditions behind the lines in Belgium, but the argument is a two-edged one, for the reason that it enables us to predicate the same measure of safety for British squadrons detailed for the "strafing" of German towns. Meantime the demand for reprisals is becoming so loud and insistent that something will have to be done in the matter lest worse befall. There is a limit even to British stoicism, which will willingly, even cheerfully, suffer the unavoidable, but which is apt to get uncomfortably restive under ills it does not understand or believes could be avoided with competent management. In a word, either there must be inaugurated at once a policy of hitting the Hun where he will feel it most, or there must be a frank statement of why we are unable to do it. And, if we cannot, it will not avail to advance merely sentimental reasons. We have got beyond that, and the temper of the people is rising to a point at which they will refuse to be put off with talk about "clean hands" and the rest of the nauseous piffle of the pacifists and the sentimentalists. Even they must realise now that war as made in Germany is a grim business, and requires to be handled in grim fashion.

**Business  
War  
after the  
War.**

Mr. Holt Thomas, writing on this subject in the *Daily Mail*, passes on the suggestion made to him by a well-known French journalist that the Allies should announce as a counter to the

German policy of frightfulness that:—

"(1) On the first ship sunk in contravention of international law the Allies would close definitely for 20 years one of their ports against the German ships.

"(2) A list of the ports in the order in which they would be closed should be definitely announced.

"(3) A German ship should be considered to be:—

"(a) A ship built in Germany.

"(b) A ship belonging to the Germans.

"(c) A ship of which the crew consisted of more than 50 per cent. Germans.

"(d) A ship carrying German merchandise of any sort."

We would interpolate into the first paragraph of this the words, "or on the first aerial raid on an Allied open town," and further, make it perfectly clear that for every ship sunk or raid carried out another port would be closed. We would go even beyond that and give notice that if frightfulness of the kind so dear to the heart of the Hun were persisted in after a period of, say, two months, every

port of every Allied country should be indefinitely closed to Hun shipping and merchandise. The Germans have shown the world that they are absolutely unfit for intercourse with civilised peoples. They have taken all and every pains to demonstrate that they are pariahs of the very mangiest type, so there can be no questions of sentiment regarding the punishment of their foul deeds. We certainly do not want them, and we can well do without their merchandise. We have got along very well without either their company or their goods for more than three years now, and there does not seem to us to be any good reason why we should accept either in the future. Apart altogether from the ethical side of the matter, there is self-preservation to be considered. We do not want another great war sprung upon us fifteen or twenty years hence, and we know that so far from Germany having renounced her dreams of world domination, her only regret is that her plans have miscarried, and she is busy thinking out alternatives for another attempt which shall bring her the desired result. Until, therefore, we can be reasonably certain that the German people have sincerely repented of their evil deeds and have renounced once and for all their present aims, it is absolutely essential, in order that the peace of the world shall be preserved, that Germany shall be held down from the economic and industrial expansion which alone will provide her with the means for making another attempt on the liberty of nations. The Hun is an outcast of civilisation. He has deliberately chosen the part. Therefore let us see that he continues to fill it until he sincerely arrives at the conclusion that it is a part which does not and cannot pay him. It is full time that we made up our minds to this. Germany is preparing apace for the commercial war that will follow on the cessation of hostilities, and is doing all she can to secure a favourable handicap. She has destroyed a large proportion of the world's shipping and is herself building apace in readiness for the attempt to capture the carrying trade of the world. She has stripped naked the mills and factories of the territories in her temporary occupation with the cynically avowed object of giving herself an industrial start in the race, and says in so many words that while the Allies are reconstructing their industries she will be enabled to capture the markets overseas. There is manifestly only one policy which will effectively counter the German plans. The Allies have command of the ocean routes, the coaling stations and the ports of the whole world. If we decide that way, then not one ton of German shipping or one ton of merchandise can pass the ocean highways. Are we going to use this potent, this decisive weapon, or is Germany to be given the free hand she obviously expects to get? In exercising this power to the full, one very wide loophole will have to be guarded against—the prevention of Germany being able to make "clearing houses" for their imports and exports of present Neutrals, including Holland, Denmark, Switzerland and other countries, to the enrichment of the said Neutrals, by enabling them to take tolls from Germany which legitimately should go into the pockets of the nations fighting for civilisation.

**British Aviators Released by Holland.**

It was officially announced by the Dutch Ministry of Marine on September 29th that the two British aviators who were brought to Nieuwediep on the 25th inst. by a Dutch fishing vessel after they had been obliged to come down on

the open sea, have been set at liberty. Their machine, however, has been seized by the Dutch authorities. Apparently this is the machine, first reported as a French seaplane, which came down, through lack of petrol, off the Haaks Lightship.

## HONOURS.

### Honours for R.N.A.S.

It was announced in the *London Gazette* of October 1st that the King had been pleased to approve of the award of the following honours, decorations, and medals to Officers and Men of the Royal Naval Air Service:—

(1) For services on patrol duties and submarines searching in Home Waters:—

#### *Distinguished Service Order.*

Wing Cdr. R. P. ROSS, R.N.; Act. Cdr. O. H. K. MACGUIRE, R.N.

#### *Bar to the D.S.O.*

Wing Cdr. A. W. BIGSWORTH, D.S.O., R.N.

#### *Distinguished Service Cross.*

Flt. Cdr. G. F. BREESE, R.N.A.S.; Flt. Cdr. A. Q. COOPER, R.N.A.S.; Flt. Cdr. J. S. WHEELWRIGHT, R.N.A.S.; Flt. Cdr. J. G. STRUTHERS, R.N.A.S.; Flt. Cdr. C. MACLAURIN, R.N.A.S.; Flt. Lt. J. A. CARR, R.N.A.S.; Flt. Lt. J. W. WALKER, R.N.A.S.; Flt. Lt. C. S. COLSTON, R.N.; Flt. Lt. J. F. DIXON, R.N.A.S.; Flt. Lt. A. S. ELLIOTT, R.N.A.S.; Flt. Sub-Lt. T. G. C. WOOD, R.N.A.S.; Flt. Sub-Lt. W. J. DE SALIS, R.N.A.S.; Flt. Sub-Lt. A. L. SIMMS, R.N.A.S.; Flt. Sub-Lt. H. M. MORRIS, R.N.A.S.

#### *Bar to the D.S.C.*

Sqdrn. Cdr. F. J. RUTLAND, D.S.C., R.N.A.S.

#### *Distinguished Service Medal.*

Air Mech., 1st Gr., J. M. QUAIL, O.N. F.8381; Ldg. Sea. H. G. COOK, O.N. 230789 (Po.) (now Warrt. Offr., 2nd Gr.); E.R.A., 3rd Cl., W. F. SHAW, O.N. 271948 (Po.); Air Mech., 1st Gr., A. J. REDMAN, O.N. F.7470; Air Mech., 2nd Gr., W. R. LIDDIARD, O.N. F.13497; C.P.O. Mech., 3rd Gr. (E.), J. G. COCKBURN, O.N. F.8627; Air Mech., 1st Gr. (E.), E. MCCORMACK, O.N. F.8678; A.C., 2nd Gr., D. A. THOMAS, O.N. F.17436; Air Mech., 1st Gr., C. HARRISON, O.N. F.9484; P.O. Mech., E. E. TURNER, O.N. F.364; C.P.O. N. B. HOLMES, R.N.R., O.N. 302 WTS.; Ldg. Mech., T. B. THOMPSON, O.N. J.13350; Air Mech., 1st Gr., W. FAIRNIE, O.N. F.11069; P.O. Mech. H. Say, O.N. F.3212; C.P.O. Mech., 3rd Gr., G. JARRETT, O.N. F.2588; C.P.O. Mech., 3rd Gr., J. SMITH, O.N. F.4200; C.P.O. Mech., 3rd Gr., J. M. BEARD, O.N. F.618; Air Mech., 2nd Gr., G. L. WRIGHT, O.N. F.9964; Air Mech., 2nd Gr., H. M. LEWIS, O.N. F.8525; Air Mech., 2nd Gr., D. A. ALDERTON, O.N. F.13047; Air Mech., 2nd Gr., C. TURL, O.N. F.9807; C.P.O. Mech., 2nd Gr., W. E. BRADLEY, O.N. F.3646; Act. Air Mech., 1st Gr., H. D. GREGORY, O.N. F.8820; W.T.Op. A. K. WISE, R.N.R., O.N. 389 WTS.; Act. Air Mech., 1st Gr., C. M. M. MCCARTHY, O.N. F.13474; Air Mech., 2nd Gr., J. WHITE, O.N. F.10369; Ldg. Mech. G. H. DALY, O.N. F.5120; P.O. Mech. C. P. LITCHFIELD, O.N. F.3630; Ldg. Mech. T. N. BORE, O.N. F.3616; Air Mech., 2nd Gr., S. A. JEFFERIES, O.N. F.5783; Ldg. Air Mech. N. H. JENKINS, O.N. F.3663 (now Prob. Obs. Offr., R.N.A.S.).

#### *Bar to the D.S.M.*

C.P.O. Mech., 3rd Gr., V. F. WHATLING, O.N. 238581 (Ch.).

#### *Mentions in Despatches.*

The following officers and men have been mentioned in despatches:—

Wing Cdr. J. N. FLETCHER, R.N.A.S.; Sqdrn. Cdr. C. R. F. NOYES, R.N.; Sqdrn. Cdr. J. W. O. DALGLEISH, R.N.; Sqdrn. Cdr. L. TOMKINSON, R.N.; Wing Cdr. F. L. N. BOOTHBY, R.N.; Flt. Cdr. E. B. BEAUMAN, R.N.A.S.; Flt. Cdr. I. H. B. HARTFORD, R.N.A.S.; Flt. Cdr. G. E. LIVOCK, R.N.A.S.; Flt. Cdr. F. G. D. HARDS, D.S.C., R.N.A.S.; Flt. Cdr. W. H. WATT, R.N.A.S.; Flt. Cdr. J. B. COLE-HAMILTON, R.N.; Act. Flt. Cdr. A. DURSTAN, R.N.A.S.; Flt. Lt. J. A. BARRON, R.N.; Flt. Lt. E. R. H. TURNOUR, R.N.; Lt. J. M. BURKE, R.N.V.R.; Flt. Lt. H. A. PAILTHORPE, R.N.A.S. (since killed); Flt. Lt. C. J. HALLINAN, R.N.A.S.; Flt. Lt. C. W. SCOTT, R.N.A.S.; Flt. Lt. S. E. TAYLOR, R.N.A.S.; Flt. Lt. G. F. MEAGER, R.N.A.S.; Flt. Lt. T. H. NEWTON, R.N.A.S.; Flt. Lt. J. O. GALPIN, D.S.C., R.N.A.S.; Flt. Lt. G. R. HODGSON, R.N.A.S.; Flt. Sub-Lt. F. S. MILLS, R.N.A.S.; Flt. Sub-Lt. K. G. BOYD, R.N.A.S.; Flt. Sub-Lt. H. L. F. MCLEAN, R.N.A.S.; Flt. Sub-Lt. F. H. MCMASTER, R.N.A.S.; Flt. Sub-Lieut. C. S. IRON, R.N.A.S.; Flt. Sub-Lt. W. F. DICKSON, R.N.A.S.; Obs. Sub-Lt. D. S. EARP, R.N.A.S.

C.P.O. Mech. 2nd Gr., J. WRIGLEY, O.N. F.469; C.P.O. Mech., 2nd Gr., H. T. DUKE, O.N. F.17272 (now Warrt. Offr., 2nd Gr.); C.P.O. Mech., 3rd Gr., R. W. JOHNSON, O.M. 13837 (Po.); C.P.O. Mech., 2nd Gr., W. GODFREY, O.N. 230931 (Po.); C.P.O. Mech. 2nd Gr., J. RODGER, O.N. M.2435 (Ch.); Air Mech. 1st Gr., R. REEKIE, O.N. F.8923; Ldg. Mech., 1st Gr. (E.), G. I. SMITH, O.N. F.3501; C.P.O. Mech. 3rd Gr., H. D. LANE, O.N. F.692; Boy Mech. C. KIDD, O.N. F.5004; Ldg. Mech. R. CONNOR, O.N. F.4597;

C.P.O. Mech. 3rd Gr., G. E. FRANKLIN, O.N. 239138; C.P.O. Mech., 2nd Gr., A. J. CORBETT, O.N. F.54 (now Warrt. Offr., 2nd Gr.); P.O. Mech. J. W. LONG, O.N. K.2075 (Po.); P.O. Mech. C. REGAN, O.N. 218371 (Dev.); Ldg. Mech. G. H. ELLIS, O.N. F.3423; Ldg. Mech. T. W. THIRLWALL, O.N. F.9430; Air Mech., 2nd Gr., F. JONES, O.N. F.5785; C.P.O. Mech., 3rd Gr., T. O. OAKES, O.N. 238732 (Ch.); Ldg. Mech. J. E. LAWRENCE, O.N. F.8762; Air Mech., 1st Gr., D. MCKENZIE, O.N. F.760; Ldg. Mech. H. LEE, O.N. F.3239; Ldg. Mech. E. B. TURNER, O.N. F.3509; Air Mech., 2nd Gr., J. E. MARTIN, O.N. J.34195; C.P.O. Mech., 3rd Gr., W. MORGAN, O.N. M.2399 (Dev.); P.O. Mech., B. F. STRAND, O.N. F.344; C.P.O. Mech., 3rd Gr., H. E. BENNELL, O.N. 234260 (Ch.); C.P.O. Mech., 3rd Gr., H. J. RICHER, O.N. F.303; Air Mech., 2nd Gr., E. C. CARTER, O.N. F.9726; Ldg. Mech. A. H. GAUNT, O.N. F.785; P.O. Mech. S. J. HEATH, O.N. 201503 (Po.); Ldg. Mech. S. J. LEITH, O.N. F.3516; C.P.O. F. S. CLOSE, R.N.R., O.N. 326 WTS.; Air Mech., 2nd Gr., D. T. WILLIAMS, O.N. F.6537; Air Mech., 1st Gr. (E.), W. L. LE MAITRE, O.N. F.3937; P.O. Mech. L. STOAKES, O.N. F.3346; Air Mech., 1st Gr., F. V. GRIFFIN, O.N. F.12487; Ldg. Mech. W. J. BAKER, O.N. F.5926; Air Mech., 2nd Gr., G. H. WINDSOR, O.N. F.8790; Ldg. Mech. (E.) F. W. AVERY, O.N. F.3209.

(2) For services in reconnaissance and bombing flights in the Eastern Mediterranean:—

#### *Distinguished Service Order.*

Wing Capt. F. R. SCARLETT, R.N.

#### *Bar to the D.S.O.*

Wing Cdr. J. R. W. SMYTH-PIGOTT, D.S.O., R.N.; Sqdrn. Cdr. C. F. KILNER, D.S.O., R.N.A.S. (Capt., tempy. Maj., R.M.L.I.).

#### *Distinguished Service Cross.*

Sqdrn. Cdr. H. STANLEY-ADAMS, R.N.A.S.

#### *Distinguished Service Medal.*

C.P.O. Mech., 3rd Gr., A. P. Marchant, O.N. 232250 (Ch.) (now Warrt. Offr., 2nd Gr.); Air Mech., 1st Gr. (C), H. M. GREEN, O.N. F.7728; Air Mech., 1st Gr., A. CARDER, O.N. F.2290; Air Mech., 1st Gr., A. E. KING, O.N. F.4373; C.P.O. Mech., 1st Gr., H. EARL, O.N. 340416 (Ch.); P.O. Mech. W. SMITH, O.N. F.2096; Air Mech. 1st Gr., (E.) H. W. WRIGHT, O.N. F.2449; Air Mech., 1st Gr., W. E. JONES, O.N. 217874 (R.F.R., Ch/B5242) (prisoner of war).

#### *Mentions in Despatches.*

The following Officers and Men have been mentioned in despatches:—

Sqdrn. Cdr. E. H. DUNNING, D.S.C., R.N.A.S. (since killed); Flt. Cdr. E. T. BRADLEY, R.N.A.S.; Flt. Lt. E. P. HICKS, R.N.A.S.; Air Mech., 1st Gr., F. E. DOWNS, O.N. F.6091; C.P.O. Mech., 2nd Gr., R. A. WELLS, O.N. F.531; C.P.O. Mech., 3rd Gr., L. D. STEWART, O.N. F.229; Ldg. Mech., E. H. PURDY, O.N. F.1494; C.P.O. Mech., 2nd Gr., E. WHITTLESEA, O.N. 344343 (Ch.) (now Warrt. Offr., 2nd Gr.); C.P.O. Mech., 2nd Gr., C. PARSONS, O.N. F.205; C.P.O. Mech., 3rd Gr., G. LAMBOURNE, O.N. 351591 (Po.) (now Warrt. Offr., 2nd Gr.).

### Honours for the R.F.C.

It was announced in the *London Gazette* of September 26th that the King has been pleased to confer the following rewards for gallantry and distinguished service in the field. The acts of gallantry for which the decorations have been awarded will be announced as early as practicable:—

#### *Bar to the D.S.O.*

Lt. (Temp. Capt.) W. A. BISHOP, V.Q., D.S.O., M.C., Can. Cav. and R.F.C. (D.S.O. gazetted June 18th, 1917.)

#### *Distinguished Service Order.*

2nd Lt. (Temp. Capt.) A. CONINGHAM, M.C., R.F.C. (S.R.).

Temp. 2nd Lt. W. F. LEECH, Gen. List and R.F.C.

Lt. (Temp. Capt.) R. J. LOWCOCK, M.C., Notts and Derby and R.F.C.

2nd Lt. (Temp. Capt.) B. E. SUTTON, M.C., Yeo. and R.F.C.

Temp. Major E. J. TYSON, M.C., Gen. List and R.F.C.

2nd Lieut. C. W. WARMAN, M.C., Gen. List and R.F.C.

#### *Bar to the M.C.*

Lt. (Temp. Capt.) S. H. CLARKE, M.C., Wilts R. (S.R.) and R.F.C. (M.C. gazetted Nov. 14th, 1916.)

Temp. Capt. P. F. FULLARD, M.C., Gen. List and R.F.C. (M.C. gazetted in this *Gazette*.)

Temp. 2nd Lt. (Temp. Major) G. B. WARD, M.C., Gen. List and R.F.C. (M.C. gazetted Nov. 25th, 1916.)

Temp. Capt. N. W. WEBB, M.C., Gen. List and R.F.C. (M.C. gazetted Jan. 1st.)

2nd Lt. W. B. WOOD, M.C., Hamps. and R.F.C. (M.C. gazetted Sept. 17th.)



*Military Cross.*

2nd Lt. R. B. ASHCROFT, Notts and Derby (S.R.) and R.F.C.  
 Temp. 2nd Lt. N. E. BARRACLOUGH, Gen. List and R.F.C.  
 Temp. Capt. A. BELL-IRVING, Gen. List and R.F.C.  
 Capt. R. B. BOURDILLON, R.F.C. (S.R.).  
 Temp. Lt. A. BOYLE, Gen. List and R.F.C.  
 2nd Lt. G. J. W. BURKETT, R.F.C. (S.R.).  
 Temp. 2nd Lt. R. M. BURNAND, Gen. List and R.F.C.  
 2nd Lt. (Temp. Lt.) J. CAIRNS, R.E. and R.F.C.  
 Lt. (Temp. Capt.) C. F. COLLETT, R.F.C. (S.R.).  
 Temp. Lt. G. B. CROLE, Gen. List and R.F.C.  
 2nd Lt. W. L. DOUGLAS, London and R.F.C.  
 2nd Lt. (Temp. Lt.) R. M. D. FAIRWEATHER, High. L.I. (S.R.) and R.F.C.  
 2nd Lt. (Temp. Lt.) C. D. FELLOWES, R.F.C. and Yeo.  
 Temp. Capt. J. FITZMORRIS, Gen. List and R.F.C.  
 Temp. 2nd Lt. (Temp. Capt.) P. F. FULLARD, Gen. List and R.F.C.  
 Temp. Lt. F. J. GIBBS, S. Staffs and R.F.C.  
 Lt. E. GRIBBEN, R. Ir. Rif. and R.F.C.  
 Temp. 2nd Lt. (Temp. Lt.) B. C. R. GRIMWOOD, R.F.A. and R.F.C.  
 2nd Lt. R. N. HALL, R.F.A. and R.F.C.  
 Lt. (Temp. Capt.) R. W. P. HALL, R.F.A. and R.F.C.  
 2nd Lt. (Temp. Capt.) H. R. HARKER, R.F.C. (S.R.).  
 2nd Lt. (Temp. Capt.) S. G. HODGES, Wilts and R.F.C.  
 Temp. 2nd Lt. S. JOLLEY, Gen. List and R.F.C.  
 Lt. F. LEATHLEY, R. Innis F. and R.F.C.  
 2nd Lt. (Temp. Lt.) G. M. LEES, R.G.A. and R.F.C.  
 Temp. 2nd Lt. T. A. M. S. LEWIS, Gen. List and R.F.C.  
 2nd Lt. R. M. MAKEPEACE, R.F.C. (S.R.).  
 Lt. R. A. MAYBERY, Lrs. and R.F.C.  
 Temp. Capt. W. A. McCLATCHIE, Gen. List and R.F.C.

2nd Lt. D. U. MCGREGOR, R.F.C. (S.R.).  
 Capt. W. T. MOLESWORTH, R. Muns. F. and R.F.C.  
 Lt. (Temp. Capt.) K. D. P. MURRAY, R.F.C. (S.R.).  
 Temp. 2nd Lt. A. R. H. NOSS, Gen. List and R.F.C.  
 2nd Lieut. C. S. O'GRADY, R.F.C. (S.R.).  
 2nd Lt. K. R. PARK, R.F.A. and R.F.C.  
 Temp. 2nd Lt. A. A. N. PENTLAND, Gen. List and R.F.C.  
 Temp. 2nd Lt. L. A. POWELL, Glouc., attd. R.F.C.  
 Temp. 2nd Lt. W. A. PRITT, Gen. List and R.F.C.  
 2nd Lt. J. G. SHARP, R.G.A. (S.R.) and R.F.C.  
 2nd Lt. C. K. SMITH, R.F.C. (S.R.).  
 Temp. Lt. G. K. SMITH, Gen. List and R.F.C.  
 Temp. 2nd Lt. R. D. STARLEY, Gen. List and R.F.C.  
 Temp. Lieut. J. A. STEVENSON, Gen. List and R.F.C.  
 2nd Lt. St. C. C. TAYLER, R. Suss. and R.F.C.  
 Temp. 2nd Lt. R. N. TREADWELL, Gen. List and R.F.C.  
 Lt. (Temp. Capt.) F. McD. C. TURNER, R.F.C. (S.R.).  
 Temp. Lt. W. WALLACE, Gen. List and R.F.C.  
 Temp. 2nd Lt. C. W. WARMAN, Gen. List and R.F.C.  
 2nd Lt. G. A. WELLS, R.F.C.  
 Lt. (Temp. Capt.) H. D. WILLIAMS, R.F.C. (S.R.).  
 Temp. 2nd Lt. E. WILSON, Gen. List and R.F.C.  
 Temp. Lt. (Temp. Capt.) H. W. WOOLETT, Gen. List and R.F.C.  
 2nd Lt. A. C. YOUNDALE, R.F.C. (S.R.).

**French Honours for R.F.C.**

It was announced in the *London Gazette* of September 26th that the following decoration has been awarded by the President of the French Republic for distinguished services rendered during the course of the campaign:—

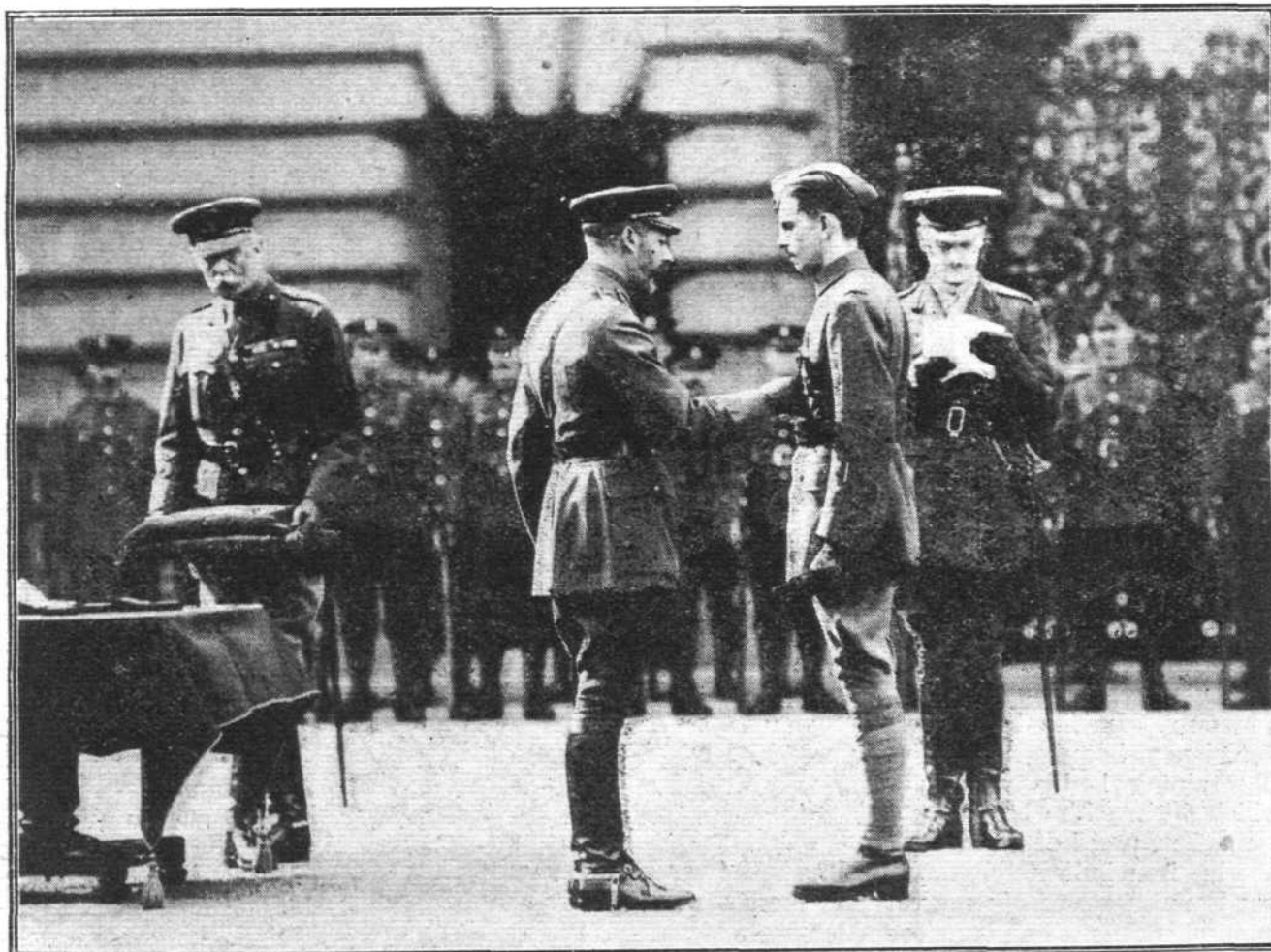
*Croix de Guerre.*

Lt. (Temp. Capt.) L. J. BAYLY, R.G.A. and R.F.C.

**Captain Laureati's Machine for England.**

CAPT. THE MARQUIS THEODOLI, who is at present in this country on a mission from General Dall'Olio, the Italian Minister of Munitions, and General Marieni, the Director-General of the Italian Air Service, has made known that the aeroplane on which Capt. the Marquis Laureati flew from Turin to London is to be placed at the disposal of the British

Flying Corps as a gift and a souvenir of the memorable event. Capt. the Marquis Theodoli added that he hopes, "before finishing an honourable career in the War Museum, it may have a chance to perform some more great feats in the skilful hands of the British against our common enemy the Hun, and that the speed and success with which it brought the fraternal greetings of Italy to Great Britain may be an augury of a speedy and successful ending of the war."



AT THE OPEN-AIR INVESTITURE OF V.Cs. AT BUCKINGHAM PALACE.—King George presenting, last week, the V.C. to 2nd Lieut. Gilbert Insall, R.F.C., who has recently escaped from Germany, where he had been detained as a prisoner of war.

# WING BRACING AND HEAD RESISTANCE.

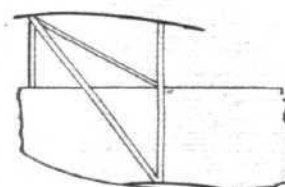
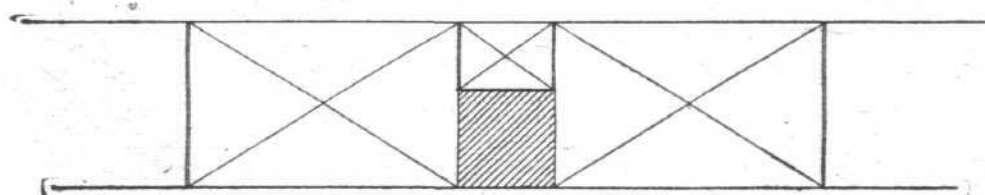
By MARCO POLO.

(Continued from page 996.)

AERODYNAMICALLY the monoplane is more efficient than the biplane or multiplane, due to the fact that there is always, where two or more planes are placed one above the other, a certain amount of interference which renders the superimposed planes, especially the lower one, individually less efficient than if it had been removed from the disturbing influence of the other. It, therefore, follows that the greater the percentage of the total area formed by the upper plane, the better the efficiency of the biplane combination, other things being equal. There are, however, various considerations to be taken into account, which are found to limit, to a certain extent, the reduction advisable of the lower wing. Thus, for instance, if the top wing be retained in its usual biplane position above the fuselage, while area of the lower wing is reduced to zero, a monoplane of what has come to be known as the "parasol" type results. In such a machine, although the view in a downward direction is particularly unrestricted, the centre of gravity is very considerably below the centre of lift, while the centre of thrust will probably be a good distance below the centre of resistance. This is undesirable for various reasons, and hence the parasol type of monoplane, in spite of its excellent qualities as regards a good

the resistance of the wing bracing of such an arrangement compares with that of the more usual designs.

As before, the total area is 265 sq. ft., of which the upper wing accounts for 177 sq. ft., and the bottom plane for 88 sq. ft. These are approximately the proportions of the planes in the Nieuport, although the areas are slightly different. In Fig. 4 is shown diagrammatically the wing bracing of the Nieuport. Apart from the difference in area of the two planes, the chief feature of the Nieuport is the single spar in the lower wing and the Vee formation of the inter-plane struts, the one being, of course, a consequence of the other. The lift wires, of which there are two on each side, run from points on the body to the upper ends of the two struts forming the Vee, while the landing wires run from the top of the centre plane struts to one point at the apex of the inter-plane strut Vee. The total length of wires on a machine of this area and with the Nieuport type bracing is, it will be seen from the table on the right in Fig. 4, 92 ft., while the total length of struts is 40 ft. 8 ins. Assuming, as in previous cases, that the struts offer twice as great resistance per foot run as the wires, we arrive at a resistance factor of 173.3, compared with a factor of 184 for the standard scout of the same area



TYPE N	UPPER WING	LOWER WING
SPAN	30'-0"	28'-0"
CHORD	5'-11"	3'-6"
AREA	177=sft	88=sft
TOTAL AREA	264=sft	
GAP:	5'-0"	
TOTAL LENGTH OF		
STRUTS:	40'-8"	
WIRES:	92'-0"	
RESISTANCE FACTOR	173	

Fig. 4.—Diagram of Nieuport type wing bracing.

view downwards, did not remain long in vogue as a military machine.

It has thus been demonstrated that although aerodynamically the monoplane is the more efficient, practical requirements tend to nullify this advantage, and we return once more to the biplane. It still remains a truth that the greater is the percentage of the total area formed by the upper wing, the better the efficiency—within limits. This proviso has precisely to do with the reasons that ultimately condemned the parasol monoplane, and to the French firm of Nieuport belongs the credit of being the first to introduce, what might be termed a successful compromise between the theoretical efficiency of the monoplane and the practical advantages of the biplane. It should here be pointed out that up till now reference to efficiency has only been in regard to *aerofoil* efficiency, not taking into account the question of wing bracing. In the Nieuport the monoplane aerofoil efficiency has been closely approximated while still retaining the biplane construction, and the success which this machine has had, and is still having daily, is sufficient proof of its merits.

Sufficient has been indicated in the foregoing to show that, apart from questions of wing bracing, the large top plane and small bottom plane, or one-and-a-half-plane arrangement, is to be considered good both aerodynamically and practically, the small lower plane obstructing the downward view to a very small extent only. There now remains to examine how

shown in Fig. 1 (page 995). It will thus be seen that this arrangement appears to be slightly better than that of a standard scout, although the overhang of the top plane is about 1 foot longer than that of the former. Probably the advantage of the Nieuport bracing would be greater in a machine of somewhat smaller area than that chosen for this article for purposes of comparison. In actual fact the standard Nieuport is of considerably smaller area.

One of the first questions that occur to one when in pursuit of reduced bracing resistance is naturally whether any wire might not be omitted. In the case of the Nieuport, as already pointed out, there are two lift wires on each side, and it might be thought possible to omit one of these. Let us examine what would be the result. When flying at maximum speed, that is to say at a very small angle of incidence, the centre of pressure moves back towards the rear spar. The top plane being of comparatively large chord, this travel of the centre of pressure is probably considerable, since it is to be presumed that for the sake of efficiency a stable wing section is not employed. This means that there is a tendency for the plane to assume a still smaller angle of incidence. This tendency can be, and probably is in the Nieuport, counteracted by choosing a suitable angle for the two lift wires. If only a single lift wire were employed, attached to the point between the upper end of the Vee struts at which the centre of pressure is normally located, and running transversely to the flight path



without having a forward angle, a backward travel of the centre of pressure would tend to raise the trailing edge of the top plane and lower the leading edge. This could only take place by swinging the point of the Vee backwards, which movement would necessitate a backward bending of the bottom plane. This would, of course, have to be resisted by the internal drift wires of the bottom plane, but with a narrow chord and the single spar of the Nieuport it might not be an easy matter to provide an internal drift bracing adequate for resisting not only drift, but in addition the extra strain imposed by the backward travel of the centre of pressure of the upper plane. For large angles of incidence, however, the travel of the centre of pressure would have the reverse effect, that is to say it would tend to reduce the load on the lower drift wires. There can be little doubt, however, that it is the drift at low angles and high speed that is the more important, and hence the employment of double lift wires on the Nieuport. Even so it will be seen that the Nieuport type of wing bracing shows the lowest resistance factor of any of the types examined so far.

Until now all the forms of wing bracing dealt with have had this in common that they embodied, to a smaller or larger extent, bracing wires in the construction. The next step in the evolution of a low resistance girder quite naturally took the form of a structure without any wires. An example of this

These figures are admittedly quite arbitrary, but the values assumed appear to the writer to be reasonable. Any proof to the contrary will be welcomed. In measuring up the struts no account has been taken of the chassis struts, since these would have to be present with any wing bracing, and are simply made to perform an extra function.

When coming to the question of structural strength the "wireless" bracing does not appear quite so good, at any rate for machines of so large areas as that chosen for purposes of comparison in these notes. The free length of spar in the upper plane is 10 ft. 6 ins. which is too large to be calculated to inspire confidence. As a friend of the writer's expressed it once in discussing the merits of this particular form of bracing "a pilot would have to have a child-like faith in the accuracy of the slide-rule wangler's stress diagram." For machines of smaller area, however, the "wireless" structure might be applicable as it stands, although it would appear that certain modifications would greatly improve the strength without probably greatly increasing the resistance.

Let us try to find out whether this would be the case. In the first instance, the chief objection to the arrangement illustrated is the excessive length of free spar. This could be very considerably reduced by employing, instead of the inverted Vee *cabane*, outward sloping struts carrying a centre section

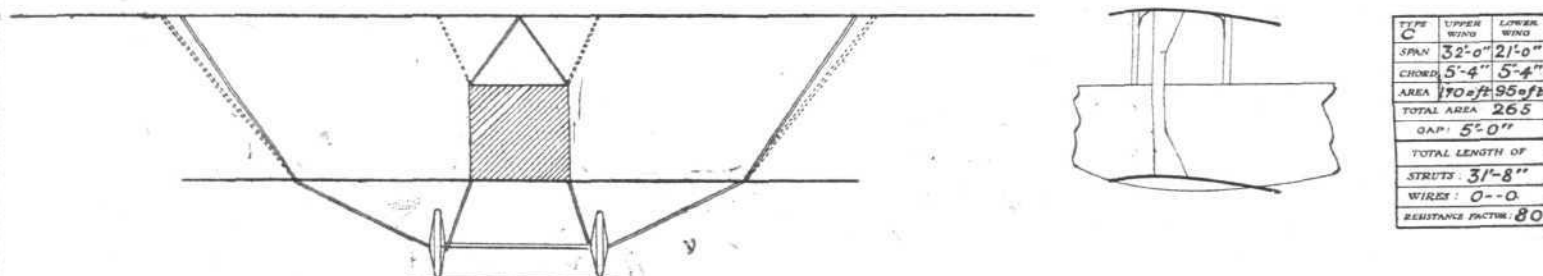


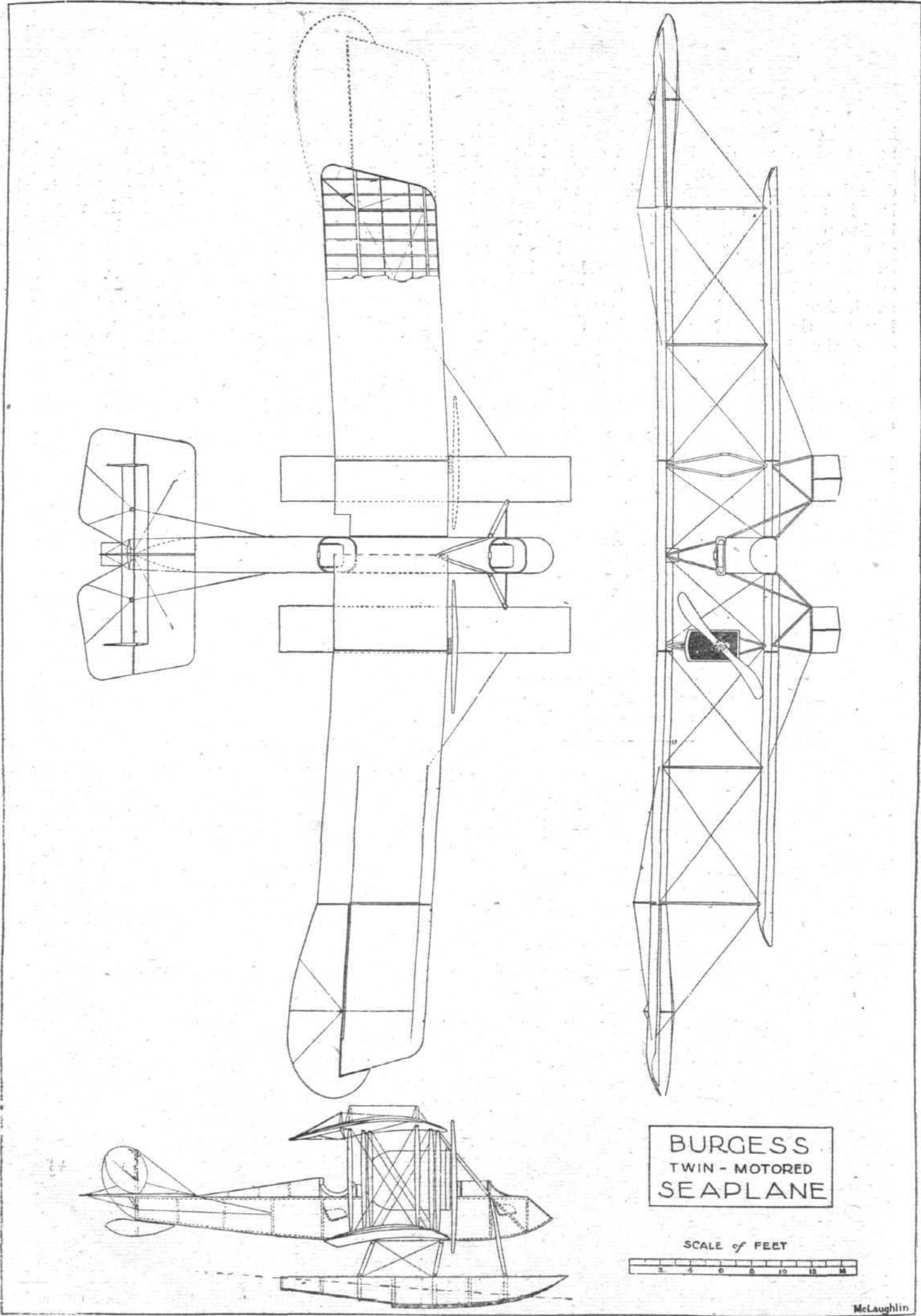
Fig. 5.—Diagram of Curtiss wireless type wing bracing.

design is furnished by the Curtiss "wireless" scout, the bracing of which is shown in Fig. 5. As in previous instances the area of 265 sq. ft. has been chosen for purposes of fair comparison, so that although the area is not the same as that of the Curtiss "wireless" the proportions are approximately correct. With this form of bracing, it will be seen, only a single interplane strut is employed. This is of a somewhat curious form, which has come to be known as a "K" strut, owing to its resemblance in side view to that letter. The centre of the top plane is supported from the body on two inverted Vee's. We now come to the most ingenious feature of the "wireless" design. Instead of the usual lift wires and landing wires there is on each side only a single strut running from the bottom plane to the hub of the landing wheel. This arrangement is rendered possible by the employment of Ackerman landing wheels in which the hub is rigidly secured to the undercarriage, the necessary resiliency being provided by the leaf spring spokes of the wheels. It will thus be seen that when the machine is in flight the two struts are performing the function of lift wires, while on landing they take on the duty of landing wires by working as struts in compression. From the table on the right of Fig. 5 it will be seen that the resistance factor is by far the lowest yet found. It has been arrived at by assuming that the resistance of the "K" struts is 2.5 times that of a streamlined cable. For the ordinary strut it may be remembered a value of two times that of a cable was assumed.

*d la Sopwith.* By making this centre section of 5 ft. span, which would not appear to be excessive, the free length of spar could be reduced to about 8 ft. 6 ins., while at the same time reducing the overhang of the top plane to about 5 ft. This arrangement is shown by the dotted lines in Fig. 5. On measuring the struts in the improved design it is found that the total length of these is actually a couple of inches less than in the original design, giving a resistance factor of 78.75, or slightly smaller than that of the original, while the load distribution would be better.

As to the merits of the "K" struts for taking care of the travel of the centre of pressure on a somewhat large chord the writer is not prepared to argue. In his opinion a laminated I strut might be found a better proposition. On the other hand, as the interplane struts are doing the duty of lift wires it might be better to employ some form of steel strut, outwardly of I shape, but made up of two halves welded together along front and rear edges. Wood, although in itself quite strong in tension, is somewhat difficult to devise a terminal connection for, since there is always the danger of the layer outside the bolts of the terminal socket "pulling out" without the whole area of the strut section having taken its share of the tensile load. When the strut is working in compression this problem does not, of course, arise, as the socket simply acts as a guide to prevent the strut from slipping.

(To be continued.)



BURGESS TWIN-MOTORED SEAPLANE.—Plan, side and front elevations to scale.



## FROM OTHER LANDS.

### BURGESS TWIN-MOTORED HYDRO-AEROPLANE.

TRIALS are now under way to list for official purposes the performance results of the twin-motored hydro which has just been completed at the Marblehead factory. The design takes in consideration the advantage of locating a machine-gun operator forward of the planes and propellers. The machine, besides being equipped with the usual complement of instruments, has the Sperry gyroscopic stabiliser and other improved installations.

#### General Dimensions.

Span, upper plane	.. ..	72 ft. 0 ins.
Span, lower plane	.. ..	51 ft. 9 ins.
Chord, both planes	.. ..	7 ft. 7 ins.
Gap between planes	.. ..	6 ft. 11 ins.
Length over all	.. ..	32 ft. 5 ins.
Height over all	.. ..	13 ft. 3 ins.
Gross weight	.. ..	5,380 lbs.
Motors (2) Sturtevant 5A, each	.. ..	150 h.p.
Gliding angle	.. ..	8½ to 1
Climb in 10 minutes	.. ..	3,500 ft.
Speed range, loaded	.. ..	78-45 m.p.h.

**Planes.**—Upper plane is in five sections—the flat centre section 12 ft. 6 ins. wide; the outer sections each 16 ft. 8 ins. wide; and the overhanging sections 11 ft. 4 ins. wide. The ends of the *ailerons* project beyond the wing tips at either side for a distance of 1 ft. 6 ins.

**Ailerons** on the upper plane are 12 ft. 10 ins. in length, minimum with 2 ft. 1 in., maximum width 3 ft. 5 ins. A small balancing portion beyond the wing tips extends for-

**Fuselage.**—The *fuselage* is 27 ft. 6½ ins. long; maximum width, 2 ft. 4 ins. Maximum depth between *longerons*, 2 ft. 11 ins. The nose extends 6 ft. 11 ins. forward of the main planes. The observer's cockpit is located at the nose, and the pilot is located immediately below the trailing edge of the upper plane.

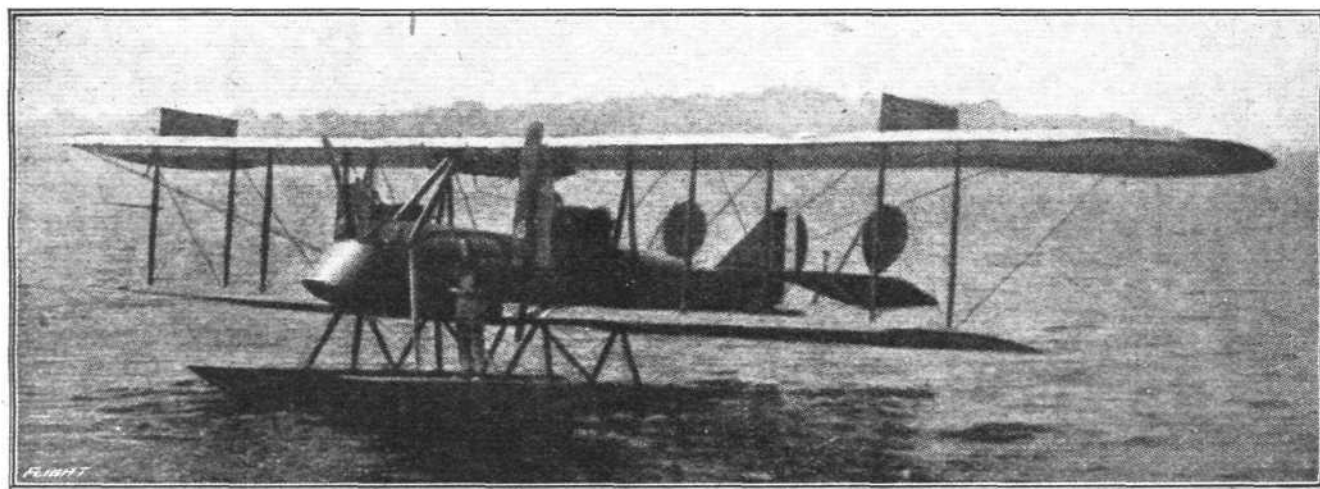
Location of vertical *fuselage* members are indicated by dotted lines on the drawing. The *fuselage* termination is 18 ins. high, formed by a strut which carries the central rudder and also supports the tail float.

**Tail Group.**—Horizontal stabiliser, 16 ft. across at the trailing edge. Width, 4 ft. 0½ in. The leading edge is straight for a distance of 13 ft. 4 ins., then curved in a 9 ins. radius to a raked angle. It is non-lifting. Elevators are 16 ft. 8½ ins. from tip to tip. Maximum width, 3 ft. 8 ins. Control posts located 6 ft. apart, one on each flap.

The vertical fin is 3 ft. 2 ins. high, and to it the central unbalanced rudder is hinged. The central rudder is 2 ft. 3 ins. wide.

In addition to the central rudder, there are a pair of balanced rudders located 6 ft. to either side of the fin. These rudders have a maximum height of 3 ft. 2 ins. and a width of 2 ft. 2 ins.

**Floats.**—Floats are arranged catamaran style, with centres 10 ft. apart. Each float 3 ft. wide, 19 ft. 1½ ins. long and 2 ft. in overall depth. A step 3½ ins. deep is located 11 ft. 10½ ins. from the front end. Struts to the *fuselage* are located at the following distances from the nose: 4 ft. 3 ins.; 4 ft. 9 ins.;



The latest twin-motored Burgess seaplane, at Marblehead, Mass., U.S.A.

ward of the rear main wing beam. Control arms are located 7 ft. from the inner end of *aileron*.

With the exception of the centre sections, the planes are swept back at an angle of 3°. On the lower plane, this angle corresponds to a distance of 10½ ins. that the straight portion of the leading edge recedes from a straight line at right angles to the *fuselage* centre.

Dihedral angle, centre section, upper plane, 180°. Dihedral angle of other wing sections 178 degrees.

Upper and lower planes are set at a 3° incidence angle, equal to rise in the leading edges of 4½ ins. The transverse and lateral centre of gravity is located 2 ft. 11 ins. from the leading edge, at which point a hoisting eye is located.

Centres of wing beams are located as follows: Front beam 9½ ins. from leading edge; beams 4 ft. 6 ins. apart; trailing edge 2 ft. 3½ ins. from centre of rear beam. Wing chord, 7 ft. 7½ ins.

5 ft. The dotted and dashed line indicates the water line with the machine fully loaded with a weight of 5,380 lbs.

The tail float is 19 ins. wide, 4 ft. 8 ins. long and 11¼ ins. deep.

**Motor Group.**—Motor carrying struts are located 11 ft. 7½ ins. apart. The drawing shows the motors covered in with metal cowling. Propellers are 8 ft. 10 ins. in diameter, rotating in opposite directions.

The motors are Sturtevant model 5 A, rated at 150 h.p. These motors are 8-cylinder, 4-stroke cycle, water cooled, with a 4-inch bore and 5½-inch stroke. The normal operating speed of the crankshaft is 2,000 r.p.m., and the propeller shaft is driven through reducing gears. The weight per h.p. of the motor is 3.4 lbs.

Fuel is consumed at the rate of 26 gallons per hour, and tanks have a capacity sufficient for an eight-hour flight.—(*Aerial Age*, U.S.A.)

#### Dutch Bag Four German Aeroplanes.

On September 25th a Dutch torpedo boat found a large German twin-engine seaplane down off the Zeeland Coast and ordered the occupants to come aboard his craft. They had just done so when five German seaplanes came up from Zeebrugge. One of the latter came down and endeavoured to tow away the damaged seaplane, and it required a volley from a party of marines on the torpedo boat before they desisted. Eventually the Dutch towed the big seaplane, and also the smaller one which had attempted its rescue, into Flushing.

On Friday night, one of the machines returning from a raid on England, G.O.G. 4, No. 602/16, came down near Sao van Gent. One of the occupants was wounded, and on landing the two unwounded occupants endeavoured to escape to the frontier. They were, however, caught, and are to be interned. On the machine was found six bombs, and maps of Southern England, London, Zeeland and Flanders.

Another machine, a large new heavily-armed two-decker, made a forced landing near the frontier. It was fired and completely destroyed by its three occupants, a Lieutenant and two non-commissioned officers, who have been interned.

# The Royal Aero Club of the United Kingdom

OFFICIAL NOTICES TO MEMBERS

## Informal Luncheon to Captain Laureati.

CAPTAIN LAUREATI, who recently made the non-stop flight from Turin to London, was the guest of the Committee at an informal luncheon given at the Club on Friday last. Col. Sir Capel Holden, K.C.B., F.R.S., occupied the Chair, and was supported by Wing-Commander C. R. Samson, R.N., D.S.O., Wing-Commander A. M. Longmore, R.N., Wing-Commander H. DelaCombe, R.N., Squadron-Commander R. L. G. Marix, R.N., D.S.O., D.S.C., and Lieut.-Com. H. E. Perrin, R.N.V.R. (Secretary). Amongst those also present were His Excellency Baron des Planches, Lieut. Vintimiglia, Major The Hon. E. A. Stonor, Major Waynodosky, Lieut. Loria, Cavalier Uccelli, Cavalier Biletta, Sir Leo Chiozza Money, M.P., Major Neale, R.F.C., Capt. C. H. Saunders, R.F.C., Capt. C. Gordon Bell, Mr. F. Negri, Mr. D'Arcy Baker, Mr. C. G. Greenhill and Mr. M. Nentsky.

## Club House.

The following prices have been fixed for the present by the Committee:—

Bedroom (including Bath)	..	5s. each per night.
Breakfast . . . . .	..	2s. 6d.
House Luncheon ..	..	2s. 6d.
House Dinner ..	..	3s. 6d.

## Billiard Room.

The Billiard Room is now open for the use of the Members.

## THE FLYING SERVICES FUND.

administered by

## THE ROYAL AERO CLUB.

THE Flying Services Fund has been instituted by the Royal Aero Club for the benefit of officers and men of the Royal Naval Air Service and the Royal Flying Corps who are incapacitated on active service, and for the widows and dependants of those who are killed.

The fund is intended for the benefit of all ranks, but especially for petty officers, non-commissioned officers and men.

Forms of application for assistance can be obtained from the Royal Aero Club, 3, Clifford Street, New Bond Street, London, W. 1.

## Subscriptions.

	£	s.	d.
Total subscriptions received to Sept. 25th, 1917	12,283	8	2
F. E. Rosher: Half the Royalties of "In the Royal Naval Air Service" (Second instalment of Royalties from sale of F. E. F. Harold Rosher's letters)	..	25	0 0
Staff and Workers of Gwynnes, Ltd. (Forty-seventh contribution)	..	9	10 3

Total, October 2nd, 1917 .. .. 12,317 18 5

H. E. PERRIN, Secretary.

3, Clifford Street, New Bond Street, W. 1.

## AIR RAID PRECAUTIONS.

THE following recommendations are to be read as general rules to be followed by each person during an air raid so far as they apply to the circumstances in which he finds himself:—

### Taking Cover.

1. Do not pay heed to mere rumours of a raid, but as soon as you know, whether from a public warning or from the anti-aircraft guns coming into action, or from the explosion of bombs, that an attack is imminent or has begun, take the best cover near at hand.

2. Do not wait till you see the aircraft nearly overhead or hear the explosion of a bomb near you. You cannot tell how near the next bomb may fall, especially at night, and, apart from the danger from bombs, fragments of shells may fall a long way from the guns. To stay in the open involves needless risk, even if the attack seems a long way off.

3. If you are in the open go into the nearest available building. A doorway or open archway, though better than remaining in the open, is not good cover, as it affords little protection against fragments of a bomb exploding on the ground.

4. If bombs are being dropped and there is no building near, it is better to lie down on the ground in the best ditch or hole you can find near at hand, or behind a strong wall or tree, than to remain standing in the open.

5. If you are in a building on the top floor, go downstairs, where you will have the best available cover overhead, avoiding lift wells, open stairways and parts of the building under skylights.

6. Do not look out of windows, but keep in a part of a room or passage where you will be out of the line of fragments of metal or debris which may enter by a window or door if a bomb should explode outside.

7. Do not crowd in a basement with only a single means of exit. The fumes from all bombs are injurious if breathed in any quantity, and it is advisable to have a second means of exit in case fumes should enter, or a gas pipe be broken, or rapid escape be necessary for any other reason.

8. Horses, if left unattended, should be secured sufficiently to prevent their running away.

### Fire Precautions.

9. Water is far the best extinguisher for general use against fires caused by incendiary bombs, and should be applied as promptly as possible. Keep a supply of water ready in buckets or cans, some on each floor if possible. See that they are kept filled.

10. Liquid fire extinguishers and hand pumps for directing the water on to the flames are very useful, though more expensive.

11. You are advised not to buy an extinguisher without a written guarantee that it complies with the specifications of the Board of Trade, Office of Works, Metropolitan Police, or some approved Fire Prevention Committee.

12. A supply of fine dry sand or soil may be kept ready, in pails or scuttles, in addition to water, especially where there are inflammable liquids which might be set alight. See that the sand or soil does not cake.

13. If the gas is turned off at the meter see that all burners are turned off as well, otherwise there will be serious risk of fire and explosion when the gas is turned on again.

14. Make a note of the quickest means of summoning the fire brigade—whether by telephone or the nearest fire alarm post.

### Unexploded Bombs and Shells.

15. Do not move or touch any unexploded bomb or shell. The police should be informed at once where any such missile is lying, and steps should be taken to prevent its being interfered with meanwhile.

16. If the bomb has broken and powdered explosive has been scattered about, do not bring a naked light near.

17. If it is necessary to handle the powder or any articles covered with it, take precautions as recommended, especially as to cleansing the hands.

### Fumes from Bombs.

18. Be careful not to breathe fumes given off by bombs. Do not go near where any bomb has fallen unless it is necessary to do so for rescue purposes or to extinguish a fire, or unless you are sure all fumes have cleared away.

19. If a bomb falls near you get away from the place where it has fallen as quickly as possible and keep away until the air has cleared. If you are indoors and fumes have entered the building go out into the open away from where the bomb has fallen, and if the raid is not over find other shelter.

20. While good cover is the point of most importance, choose, if you can, rooms, corridors, &c., where, in addition to cover overhead, there are alternative means of exit, so that if fumes should enter from one direction you may be able to escape the other way.

21. It is better to avoid going near the place where any bomb has fallen than to trust to respirators. If, however, you desire to keep a respirator available for use in case it should be necessary to enter a room where there may be noxious fumes, make sure that the respirator is guaranteed by the maker to comply in all essential points with War Office specification. Do not on any account rely on a respirator offered for sale unless it is accompanied by such a guarantee.



### Use of the Telephone.

22. Do not use the telephone during, or immediately after, a raid, except for the most necessary and urgent calls.

### False Reports of Air Raids.

23. Remember it is an offence punishable by fine or imprisonment under the Defence of the Realm Regulations to spread false reports of an air raid warning having been issued or an air raid having taken place.

### Powder from Bombs.

The following precautions should be taken in handling the powder from bombs:—

1. To remove the powdered explosive from surfaces on which it has fallen it is best to use a brush wetted with a weak alkaline solution—one teaspoonful of soda (bicarbonate or ordinary washing soda) to a quart of water. If the powder can be washed down with water from a hose this would suffice.

2. The powder, when collected, should not be mixed with

ordinary dust, as it might be sent to a destructor and possibly cause damage. If there is only a small quantity it may be mixed with earth and buried. When there is much of it the military authorities should be consulted.

3. It is better to use moist rags rather than gloves to handle articles covered with the powder, as a glove soon becomes penetrated with the powder, and the skin is more easily irritated, whereas the rags can be thrown away and clean ones taken as often as necessary.

4. If the hands become stained an endeavour should be made to remove the stain at once with pumice stone and the soda solution. It may be found impossible to remove the stain entirely, but no ill results are likely to follow if the hands are carefully cleansed.

5. At the first sign of inflammation of the skin—e.g., irritation or small swellings containing fluid—a doctor should be consulted.



## CORRESPONDENCE.

### Parachutes.

[1948] If pilots are to be provided with parachutes it will be necessary to train them in the correct method of using them, just as soldiers have to be trained in the use of gas masks.

Parachuting can be acquired progressively. The following is a suggestion for a graduated course:—

First and second day.—Medical inspection, explanation of apparatus, fitting of harness, releasing from harness.

Third and fourth day.—Instruction in correct method of alighting (teeth closed, toes pointed down, knees turned out), practice in jumping down from various heights on to various surfaces.

Fifth day.—Recapitulation, falling or jumping from graduated heights into an outstretched net, as used by "aerial gymnastic performers."

Sixth day.—Jumping into net in harness attached by a rope to an adjustable escapement, so that the rate of descent may be regulated by the instructor. Drops up to, say, 100 ft., and to an average maximum speed of 25 ft. per second.

Seventh day.—Ditto, but with a graduated initial free drop.

Eighth day.—Ditto, but without safety net.

Ninth day.—Witness actual demonstration by instructor from captive balloon. Make actual descent from graduated heights up to, say, 200 ft., with outspread parachute into safety net.

Tenth day.—Make ascent in captive balloon, witness actual demonstration from balloon. Make actual descent in outspread parachute without safety net from graduated heights up to, say, 200 ft.

Eleventh day.—Make actual descent in outspread parachute from captive balloon.

Twelfth day.—Make descent with folded parachute from captive balloon. From three-seated aeroplane witness actual demonstration of descent from same aeroplane.

Thirteenth day.—Make descent from aeroplane in "Guardian Angel" type apparatus.

Notes.—Sixth day: It is intended that the harness be attached to a rope which can be paid out from a reel controlled by some simple form of adjustable escapement, e.g., wind vanes or dynamometer.

Ninth day.—The outspread parachute might be arranged on the umbrella principle with light ribs. Other methods also suggest themselves.

No doubt the system of having one class of pupils a few days ahead of the succeeding class would be the means both of providing demonstrators and at the same time stimulating the pupil demonstrators to "make the plunge."

"ANTARCTICUS."

### Airmen and Life Assurance.

[1949] I was surprised to read your leading article in your issue of September 20th on the subject of "Airmen and Life Assurance." Surely your statement that "the lives of our flying men are uninsurable" is very much at variance with the often made and often repeated assurance of many of our public men (such as General Brancker, &c.) that "flying is now as safe as motoring." You yourself, if I am not mistaken, have more than once given this statement the full weight of your official approval. The expression refers, of course, to what may be called "peace flying," and is not intended to hold good when applied to flying in the face of the enemy—though even with this latter the risks to individuals are probably not greater than those of any

other of the "combatant" branches of the Army engaged in actively fighting the enemy.

Taking "peace flying" only, however, are the lives of our airmen really "uninsurable"? The statement about flying being as safe as motoring is no doubt an exaggeration; but it does not seem to me to be nearly as far from the truth as your other statements about flying risks. The whole trouble is that we have no published statistics to go on; every week—nearly every day, indeed—we read of accidents to our flying men, but what we never hear is the total number of men engaged in flying and the total number of hours or miles flown each day or week. If these figures could be obtained, it might be found—in fact, probably would be found—that the number of fatal accidents is after all quite small compared to the total amount of flying carried out. At present we hear only of one side of the case—that is, the number of accidents; and therefore everyone, the insurance companies included, get the unfair impression that flying is as dangerous as it can be and the risk prohibitive.

I suggest that the proper way for the Government to take this matter in hand is to approach some of the larger insurance companies and to give to them in confidence the statistics for all flying (apart from actual war flying) carried out by both R.N.A.S. and R.F.C. (including also civilian pilots testing Government machines) during the last three years. As soon as the insurance companies had these figures they would have something to go on, and could then determine at once—at least approximately—what was the real "insurance" risk of flying. At present, with absolutely no statistics, it is of course impossible for any insurance company to consider the question of flying risks at all.

Were the figures more available, as I suggest, it would probably be found that flying is little, if at all, more dangerous than some of the other more risky "peace" occupations—such, for instance, as mining. (I do not know whether very high premiums are asked for insuring miners.) Once get the insurance companies started, and keep them continually well supplied with figures (say, every month), and I am sure they would soon take the business up in all seriousness. Even if the premiums were rather high at first, after a year or two (as flying becomes more and more general and better and better understood), they could probably be reduced as a result of further experience.

It might be possible also to graduate premiums, the premium payable being made slightly less for each year that the insured life survives. Differentiation might also be made between unavoidable accidents—such as breakages in the air, &c.—and those shown to be due to an error on the part of the pilot (as most training accidents are now), less being charged for the former risk than the latter. This last, however, might, at least at first, lead to too many complications.

Apart from any other consideration, the enormous advance which is bound to be made in commercial flying after the war is alone a good enough reason why the great insurance companies should give the matter every consideration; because there is no question that the insurance business arising out of aviation could be made a very big and a very profitable one. However, as I have said, nothing can or will be done until the figures are available for which the real risk may be deduced; therefore let the Government take action as soon as possible to supply these figures. The insurance companies may be trusted to do the rest.

"SQUAD-COMMANDER."

[The above letter is dealt with editorially elsewhere. — ED.]

# THE ROLL OF HONOUR.

## REPORTED by the Admiralty:—

### Previously reported Missing (believed Killed), now reported Killed.

Flight Sub-Lieut. M. G. Woodhouse, R.N.

### Died of Injuries.

Prob. Flight Officer K. Lockie, R.N.

### Wounded.

Flight Sub-Lieut. C. W. L. Calvert, R.N.

Flight Sub-Lieut. R. H. Daly, D.S.O., R.N.

Acting Flight Comdr. P. S. Fisher, D.S.C., R.N.

Flight Sub-Lieut. G. S. Harrower, R.N.

Flight Sub-Lieut. W. C. Johnston, R.N.

Flight Sub-Lieut. W. L. Jordan, R.N.

### Accidentally Injured.

Prob. Flight Officer J. S. Stauffer, R.N.

Acting Sub-Lieut. H. B. Stocken, R.N.

### Slightly Injured.

Prob. Flight Officer E. Meredith, R.N.

### Missing.

Flight Sub-Lieut. J. C. Akester, R.N.

Flight Sub-Lieut. W. J. Burnett, R.N.

Flight Sub-Lieut. E. Foster, R.N.

Flight Sub-Lieut. W. Ingleson, R.N.

Flight Comdr. B. D. Kilner, R.N.

Flight Sub-Lieut. A. W. Phillips, R.N.

Flight Sub-Lieut. J. S. de Wilde, R.N.

### Previously Missing, now reported Prisoners.

Flight Sub-Lieut. N. D. Hall, R.N.

Flight Sub-Lieut. A. D. M. Lewis, R.N.

## Reported by the War Office:—

### Killed.

2nd Lieut. F. R. Brotherhood, R.F.C.

2nd Lieut. H. N. G. Dann, R.F.C.

2nd Lieut. L. Hodgkinson, R. Welsh Fus., attd. R.F.C.

2nd Lieut. L. G. Humphries, R.F.C.

2nd Lieut. E. S. R. Lennard, R.F.C.

Capt. J. Manley, R.F.C.

2nd Lieut. F. Marshall-Lewis, R.F.C.

2nd Lieut. G. H. Miles, R.W. Kent R., attd. R.F.C.

2nd Lieut. A. C. Nutter, R.F.C.

Capt. A. T. Rickards, R.G.A., attd. R.F.C.

2nd Lieut. R. Rowat, R.F.C.

2nd Lieut. N. C. Whittall, R. Fus., attd. R.F.C.

2nd Lieut. F. A. Wright, D. of C. L.I., attd. R.F.C.

765 A. E. Hayles, Aus. F.C.

38559 2nd Air-Mech. C. W. Murphy, R.F.C.

1130 1st Air-Mech. F. Russell, R.F.C.

### Previously Missing, now reported Killed.

2nd Lieut. J. E. Blake, R.E., attd. R.F.C.

2nd Lieut. J. H. Cock, R.F.C.

Capt. G. L. Cruikshank, D.S.O., R.F.C.

2nd Lieut. F. R. Croker, Lan. Fus., attd. R.F.C.

2nd Lieut. R. P. C. Freemantle, R.F.C.

Lieut. R. J. Grandin, A.S.C., attd. R.F.C.

2nd Lieut. T. J. Hudson, R.F.C.

2nd Lieut. E. W. A. Hunt, R.F.C.

2nd Lieut. T. Margerison, Cyclist, attd. R.F.C.

Lieut. B. F. Rowe, R. Fus., attd. R.F.C.

2nd Lieut. T. E. Smith, R.F.C.

Lieut. W. J. Stonier, Bedf. R., attd. R.F.C.

Lieut. S. J. N. White, Norf., attd. R.F.C.

### Previously Missing, now reported by German Government Killed or Died of Wounds.

6709 1st Air-Mech. M. A. Grundy, R.F.C.

### Previously Wounded, now reported Died of Wounds.

Lieut. H. R. Wilkinson, R.F.C.

### Died of Wounds.

2nd Lieut. N. H. Albury, R.F.C.

2nd Lieut. A. R. H. Noss, M.C., R.F.C.

2nd Lieut. A. J. Powney, R.F.C.

31241 1st Air-Mech. H. Howorth, R.F.C.

### Died.

Lieut. R. Hofmeyr, Yorks L.I., attd. R.F.C.

39859 2nd Air-Mech. A. Hirst, R.F.C.

26751 2nd Air-Mech. J. Samuel, R.F.C.

### Wounded.

2nd Lieut. R. S. C. D. Ashby, R.F.C.

Capt. H. Colmore, Hrs., attd. R.F.C.

2nd Lieut. E. B. Corry, R.F.C.

2nd Lieut. H. Dandy, R.F.C.

2nd Lieut. J. E. Frost, R.F.C.

2nd Lieut. B. C. Gay, R.F.C.

2nd Lieut. C. W. McL. Gray, R.F.C.

2nd Lieut. A. Hepburn, R.F.C.

Capt. W. A. McClatchie, M.C., R.F.C.

2nd Lieut. R. J. Paterson, Hamps., attd. R.F.C.

2nd Lieut. S. MacC. Peterkin, R.F.C.

2nd Lieut. W. J. Seward, R.F.C.

Lieut. J. W. Sheridan, R.F.C.

2nd Lieut. J. E. J. Skelton, R.F.C.

2nd Lieut. J. G. Simons, N'hampdon, attd. R.F.C.

2nd Lieut. F. L. Steben, R.F.C.

2nd Lieut. S. Thompson, R.F.C.

Lieut. R. M. Trevethan, R.F.C.

2nd Lieut. W. H. Weller, R.F.C.

2nd Lieut. H. W. Westaway, R.F.C.

### Previously Prisoner, now reported Wounded and Prisoner in German hands.

Lieut. F. Sharpe, Sher. For., attd. R.F.C.

### Previously Missing, now reported Wounded and Prisoners in German hands.

2nd Lieut. C. W. Davies, R.F.C.

2nd Lieut. W. B. Styles, R.F.C.

2nd Lieut. C. R. Richards, M.C., R.F.C.

### Missing.

2nd Lieut. A. J. Chapman, R.F.C.

2nd Lieut. N. H. Crow, R.F.C.

Lieut. T. G. Deason, Yeo., attd. R.F.C.

2nd Lieut. N. W. Goodwin, Mx. R., attd. R.F.C.

Lieut. R. L. Graham, R.F.C.

Lieut. E. Golding, A.S.C., attd. R.F.C.

2nd Lieut. H. T. Hammond, R.F.C.

Lieut. M. C. Hartnett, R. Muns. Fus., attd. R.F.C.

2nd Lieut. H. Haslam, R.F.C.

2nd Lieut. J. J. A. Hawtrey, R.F.C.

2nd Lieut. G. C. Holman, R.F.C.

2nd Lieut. T. Humble, R.F.C.

2nd Lieut. H. Ibbotson, R.F.C.

2nd Lieut. E. E. F. Lloyd, Dragoon Gds., attd. R.F.C.

Lieut. H. F. McArdle, Cav. (S.R.), attd. R.F.C.

Lieut. G. B. McMichael, Hereford R., attd. R.F.C.

Lieut. G. W. Mumford, A.S.C., attd. R.F.C.

2nd Lieut. M. G. M. Oxley, R.F.C.

2nd Lieut. E. S. C. Sen, R.F.C.

2nd Lieut. L. M. Shadwell, R.F.C.

2nd Lieut. A. H. Skinner, R.F.C.

2nd Lieut. C. A. Sutcliffe, R.F.C.

2nd Lieut. N. J. Taylor, R.F.C.

2nd Lieut. R. E. Taylor, R.F.C.

2nd Lieut. S. H. Taylor, R.F.C.

2nd Lieut. E. D. Tyzack, R.E., attd. R.F.C.

2nd Lieut. J. S. Walthew, R.F.C.

2nd Lieut. L. F. Wheeler, R.F.C.

2nd Lieut. J. B. H. Wyman, R.F.C.

### Previously Missing, now reported Prisoners in German hands.

Lieut. C. H. Beldam, Cambs. and R.F.C.

2nd Lieut. E. P. Fulton, R.F.C.

2nd Lieut. J. W. Gillespie, R.F.C.

2nd Lieut. J. B. Hine, R.F.C.

Lieut. W. H. Howes, R.F.C.

2nd Lieut. W. B. Kellogg, R.F.C.

2nd Lieut. P. A. O'Brien, R.F.C.

2nd Lieut. R. S. Phelan, R.F.C.

2nd Lieut. W. R. K. Skinner, R.F.C.

2nd Lieut. H. G. Tambling, R.F.C.

2nd Lieut. S. F. Thompson, Suff., attd. R.F.C.

2nd Lieut. H. E. A. Waring, R.F.C.

2nd Lieut. T. W. White, R.F.C.

Lieut. M. T. Wright, L.N. Lancs., attd. R.F.C.

Lieut. J. G. Young, Leins. R., attd. R.F.C.

### Captain Heurteaux Wounded.

NEWS was published in Paris on September 30th that in a recent fight Capt. Heurteaux, of the "Storks" Aviation

Squadron, to which the late Capt. Guynemer belonged, and of which Lieutenant Nungesser is also a member, received two bullet wounds.



## AIRISMS FROM THE FOUR WINDS

"CARRY ON" was the only response last week end from a seamen's meeting at the Albert Hall, when warning of the approach of Hun air raiders was announced. Lord Beresford was the kind of chairman to accept the order without even a show of hands, and characteristically his method, greeted with vociferous applause, was: "We are very much obliged to the War Office for their warning. We shall not take the slightest notice of it. We shall go on with the meeting." And the gathering "carried on" accordingly.

JUDGING by the following paragraph circulated to the Press, it was an extra "foul" raid that of Tuesday last week: "Persons whose fowls were killed in Tuesday's air raid on the South-East London district should write to Mr. W. G. Tarbet, Secretary of the National Utility Poultry Society, 3, Vincent Square, S.W.1, who is prepared to replace the birds."

AIR-RAID damage does not look much like ever becoming a subject for Imperial compensation, having regard to a reply of the Home Office to the Kingston-on-Thames Corporation, to the effect that emergency expenses incurred in connection with air raids, such as preventing danger from damaged buildings or rescuing people from the ruins, should be paid from local funds. Looks as if all those accumulated fines inflicted by the Kingston Bench, during their systematic "raids" on motorists for the past 20 years, might come in useful now.

MORE Hun "frightfulness." One German raiding aeroplane last week, after passing through our defence gunfire in an Essex district, let loose a stream of petrol over a wide area in the eastern part of a town, just to show, no doubt, how they can afford to waste things, and thus make folk in Britain desperate at their terrible conditions, compared with the Central Empires.

ROBERT JAMES, *etat* 97, a tenant on the estate of the Hon. Lionel Walrond, Uffculme, Devon, might, if he be not a strict George Washingtonian, plausibly claim that he foresaw 80 years ago the coming of aviation and helped to provide for its advent, when he planted a number of aspen trees and then "squatted" in his near-by cottage until now, when he at long last is taking a hand in felling those self-same trees for aeroplane construction.

"AND didn't the guns make the stars jump!" was a child's description of the phenomena of one of the night raids last week.

WHATEVER else Mr. Lloyd George may be accused of, he certainly can plead not guilty to being a poltroon. To suggest that the Prime Minister skipped off from his official duties to Walton Heath when the raiders were announced as on their way to London on Monday last week is so obviously the opposite of what Lloyd George would do that the statement in a London evening to that effect hardly required refuting. But perhaps it is just as well some action should be instituted, if only by way of protest to the scandalous attacks which are still levelled broadcast at some of our greatest patriots, who are fearlessly doing their duty to the Nation, however distasteful their action may be to certain sections of the community, whose personal interests may be adversely interfered with for the general good. There are a few folk who well deserve a drastic lesson.

WHEN there is any special information to be gleaned as to ways and means of some of our heroes, King George is ever keen to have the data direct from the individual soldier concerned. Thus last week in connection with the Investiture of V.C.s. and other Honour recipients, Lieut. Insall, V.C., had an opportunity of giving His Majesty the details of his recent escape from Germany, &c., and it may have been noticed that again, on Thursday, Lieut. G. F. Knight, Devonshire Regt., attached R.F.C., and Lieut. C. F. L. Templer, Gloucestershire Regt., had special audience of the King, when they told at Buckingham Palace their little stories of how they managed to elude the vigilance of their Hun gaolers.

LIEUT. G. F. KNIGHT's adventures, as related to a friend, are as follows: He was on a bombing raid near Bapaume, when his controls were shot away and he had to land well behind the enemy's front line. He was then taken to Cambrai citadel. "I had not been there long before," said Lieut. Knight, "I set about to escape. Opportunity came sooner than I expected. I got through the German lines at night in a suit of the Belgian-peasant sort and swam the Cambrai Canal. When I was almost over I spotted a Boche sentry on the opposite bank. He heard me in the water and looked hard in my direction. It flashed through my



The late Capt. Guynemer, the champion French "Ace," who was reported missing on September 11th. According to the German paper, the *Gazette des Ardennes*, he was shot down and killed on that date, and a German pilot who has been taken prisoner by the Canadians has told the same story.

mind that he might imagine the noise was made by a dog. I gave colour to this impression by paddling round in the manner of a retriever, and whining nicely, making, meantime for the bank from which I had plunged in.

"I scrambled out again, cold and somewhat disappointed, and made for the railway bridge with the idea of getting into our lines. I was making my course by the flashes of our own guns, which were plainly visible ahead. I found, however, I was out of my reckoning, and stumbled once more into the Boche's quarters. I hid when I could, posing as a workman. I came across a small straw-stack, well behind a Hun camp, and lay 'doggo' for the night. Unfortunately my luck was dead out; a Boche transport man came to my nesting place for an armful of straw and collared my head in the armful. He was quite surprised. I knew it was no good trying to bluff him, so I surrendered once more with as good a grace as possible.

"I was sent back to Cambrai. Afterwards they moved me by train—a very uncomfortable journey—under close escort to Osnabrück and Klausthal (Harz), and then to Ströhen. Our food was obtained chiefly from the parcels from home. They invariably arrived safely, and more often than not untouched by pilfering fingers. Everyone German about the place seemed 'fed up' with the war. The guards were tired of doing guard duty on little food, but the country folk did not seem so badly off. Vegetables and milk seemed more plentiful, and the people looked better fed and happier."

THE lieutenant, after getting away undetected from the Ströhen camp with emergency rations of biscuits and chocolate (sent from his Devonshire home), hid by day and travelled by night, successfully eluding in a ten-night tramp all the soldiers hunting for him.

"One early morning," he said, "I went into a cornfield, after walking nearly all night, to prepare a snug hiding-place for myself among the stooks. An aged farm labourer saw me arranging the sheaves and called out: 'Here, what are you doing?' I replied in German, 'Can't you see what I'm doing?' He evidently could not, for he ambled quickly towards me. I thought it was time to leave, so I left via a big ditch and dodged behind a haystack and so got away.

"I found another hiding-place that day, and the next night I milked a Hun cow in a field."

THE Aero Club of America has notified President Wilson of its approval of the proposal to name the first national airway "The Woodrow Wilson Aerial Highway," in appreciation of the President's support of the cause of aeronautics and also in commemoration of his signing of the \$640,000,000 aerial appropriation.

The airway is to run in a straight line from New York to San Francisco, with connecting branches in all parts of the United States. A committee of the Aero Club is now working on the details, and it hopes to have the line established within a few months.

Many prominent men are interested in the project and are serving on the board of directors.

IN France, as here, wages disputes, just and very much the reverse, have from time to time cropped out, and have in most cases been settled in reasonable time without doing much harm to the cause of the Allies. Naturally, French aeroplane factories have not been free from the contamination, and last week, what at one time promised to develop into serious trouble was once again avoided by the acceptance by both sides of an arbitration award, as to the main questions involved, promulgated by the Permanent Committee of Conciliation and Arbitration of the Seine. Possibly the disputants may have been influenced in their speedy acceptance of the "award" by the prompt action of the French Cabinet, which at once notified both sides that a strike movement would not be tolerated, and that, while confining itself to intervening in a just and friendly manner in the settlement of the dispute on the question of wages, decided to take over the factories and apply military discipline to the workmen, considering that their action might be detrimental to the national defence. Military factory discipline in France is not exactly the same thing as "controlling" a manufacturing firm in England. Moral: immediate decision of the workmen to "carry on."

CAPT. LEWIS SCOTT WHITE, R.F.C., Fighting Instructor at Wiltshire Camp, who was decorated with the M.C. on Wednesday last week, did not live long to enjoy his honours. Two days later he met his death at Wantage.

HAVING in mind the present moonlight visits of the Gotha squadrons to London, anything much more fatuous can hardly

be imagined than to announce an anti-aircraft gun practice in North-East London for Monday night last at 7 o'clock. The "practice" was fortunately promptly cancelled, else there might well have been a big haul of casualties had the Gothas managed to strike the particular district about the same time as the gun practice was supposed to be in full swing. Officialdom has occasionally some queer notions of the fitness of things.

IN the new "barrage" system of defending London from nocturnal raiders is to be found the answer as to warnings or no warnings. Any member of the community who requires much more direct intimation to get to cover than is conveyed by the curtain of shrapnel which now precedes the approach of the raiders must be past praying for. Clubbing in such cases would be about the only effective argument to employ as an alternative.

THERE is material for thought in a few remarks at Sheffield last Saturday from General Sir David Henderson, upon the occasion of the presentation to Newfoundland of Sheffield's gift—a fighting aeroplane for the front. Sir David, after reminding his hearers that the Air Service had expanded since the beginning of the war at a greater rate than any other service, said that the "Master Cutler" of Sheffield had unsuccessfully endeavoured to draw him on the subject of a United Air Service. All the same, he had strong opinions on the subject, and he had stated them for the last two years to the proper people. Some day those opinions would be known, with others, and perhaps before very long.

The italics are ours.

"THOUGHTS during an Air Raid," an address to the people of London from the Bishop of London, just issued, should help to reconcile the public even still more to the infliction imposed by the Huns. Nevertheless, there is nothing like hitting back and hitting back hard to ensure the rules of the game being thoroughly understood and appreciated. The first four clauses of Dr. Ingram's address set out that:—

"(1) This is our bit of danger. We have suffered very little in our country compared to our Allies, but while the enemy is in Belgium we are in the war zone. Let us recognise it and be proud of it, and continue to show the fortitude and courage which our fathers, sons, brothers and friends show under far greater dangers every day and night.

"(2) Any sign of fear or panic only encourages the enemy to persevere. His only object in these otherwise useless raids is to terrify the civilian population at home, and the calmer we are the more we defeat him.

"(3) The risk to any individual person among seven millions is very small if we obey the police regulations and warnings. The sound of the firing comes far more often from the guns of our gallant defenders than from bombs dropped by the enemy.

"(4) If we do happen to be among those who are killed, we die for our country and for the freedom of the world as really as our brothers die in the trenches, and are upon the Roll of Honour of our country."

THE following is taken from "An Oration: on the great conflagration of civilisation, in the Modern War Oratory style," by Mr. Arnold T. Prentice in the *Saturday Westminster*:

"Their adaptation of aviation for causing consternation and perturbation or intimidation of our island population is a demonstration of the aberration of their mentation, for the visitation of a creation of aviation, though causing cineration of habitation and dissipation of fenestration and assassination of civilian population, will never cause attenuation or relaxation of our determination for the administration of a severe castigation or flagellation to the nation whose exultation in such a violation of civilisation gives indignation and nausea to the population of every decent nation."

Now Germany will perhaps realise what she is doing!

## TEN YEARS AGO.

Excerpts from the "Auto." ("FLIGHT's" precursor and sister journal) of September, 1907. "FLIGHT" was founded in 1908.

### REISNER AEROPLANE.

M. Reisner, Professor of Mathematics at the Aix-la-Chapelle Polytechnic, has just had constructed by Messrs. Voisin a full-sized aeroplane, with which he will shortly be making experiments. The aeroplane is of the typical double-decked type, mounted upon a light tubular framework carrying a 16-cylinder 70 h.p. Antoinette engine. At the rear, also carried by a light framework, is a large box kite, acting as a tail for the purpose of giving the necessary stability. The main aeroplane has a total surface of 56 sq. metres.



## NOTES FROM PARIS.

By D. W. THORBURN.

NOTHING could better illustrate the progress of aviation during the last three years than the latest record flight across the Channel. It was on July 11th, 1914, that the historic London-Paris-London race took place, and Walter L. Brock secured the prize with what was then undoubtedly a magnificent performance, his total time for the journey there and back being 7 hours 3 minutes. The distance from Hendon to Buc is 254½ miles. Yesterday (September 27th) one of our best known British aviators arrived at Buc, near Paris, on one of the very latest British machines, and the non-stop flight from Hendon took exactly 2 hours and 25 minutes! This is all the more striking, as he had no favourable wind to assist him. Of course, I am unable to give particulars of the machine and its motor at present, but I hope a little later on to be allowed to give full credit to the pilot and to those responsible for the production of the machine and the motor. Meanwhile, much harm may it do to our enemies.

DURING the past few months I have made the acquaintance of a large number of the American aviators now flying in France, and a fine, sporting lot of fellows they are. Among them are representatives of some of the wealthiest families in the United States. Young men fresh from the Universities, with all the attractions and comforts of life at their disposal, who threw up everything in order to come over to Europe and place themselves at the disposal of the Allies, long before America had decided to join in the great world-struggle against the iniquitous Central Powers. Many of these good men have died brave deaths in the air. Almost daily one hears of another friend missing. This morning I heard of a particularly sad case. A fine fellow from San Francisco, who came over during 1915 and had been flying and fighting ever since, came to Paris last Saturday morning to meet his mother, who had arranged to pay him a visit. Unfortunately her boat was delayed, and on Sunday he went back to his duties with the French Army. Before nightfall he had

been shot down in the course of a great fight with several Boche aviators.

HAVING been so intimately concerned with the American colony in France, I have lately been reading the Paris edition of the *New York Herald*. The American journalistic touch is to me always refreshing. This morning I notice a brief note from *Le Matin*, which has been translated thus:—

"Dutch coast towns report that heavy firing without a let-up has been heard in the North Sea since Thursday last."

I like that "let-up." When our American Allies really get to work on a big scale I am looking forward to some really breezy descriptions of aerial fighting. Meanwhile, the following paragraph, also taken from the Paris *New York Herald*, is not without interest:—

"AMERICAN FLYERS, IN CONCERTED RUSH,  
REPULSE GERMANS.

"Get those fellows, boys!"

Capt. Thenault, of the Lafayette Squadrilla, shouted the order to a group of his comrades at an aviation base at the front a few days ago. The boys, who included Maison-Rouge, Richmond, Peterson, Courtney Campbell, Kenneth Marr, Stephen Bigelow, René Haas and Chouteau Johnson, were in their trim little Nieuport fighting machines in the twinkling of an eye. Ten minutes later the French "poilus" in a front line trench at V—cheered lustily as the German formation, with two or three exceptions, scattered and fled before the driving onrush of the American flyers.

The few German pilots who remained to give battle were overwhelmed by the Americans and sought to escape. Two of them succeeded in getting away, but the third, his machine riddled with machine-gun bullets, was seen to crash 5,000 ft. to earth.

This is the answer of the Lafayette flyers to the Kaiser's action in putting a price on the head of the first American taken prisoner. All Americans on the front, incensed at the war lord's step, vow that they will sell their lives dearly."

### To Readers—One and All.

THE Editor of "FLIGHT" will at all times be pleased to consider original articles (illustrated or otherwise) on subjects directly or indirectly allied with aviation. All articles accepted will be paid for; a high literary standard of writing is not essential; it is the facts which matter. Practical explanatory articles are most acceptable. Diagrams and similar illustrations need only be rough sketches if necessary.

### Another Italian Record.

REPORTS from Rome state that a chaser aeroplane, designed, it is said, by two Italian officers, and built in Italy, with Sergt. Stoppani as pilot, on September 28th flew from Turin to Rome in 2 hours 50 minutes. He left Turin at 2.45 p.m. The speed of the machine, allowing for drift, was 220 kilometres (137½ miles) an hour.

### Belgium's First "Ace."

ONE of the ceremonies which marked the visit of the King of Italy to the Belgian front last week-end was the decoration of the first Belgian "ace," Dhiethieffry. A fine display of airmanship was also given by Belgian officers.

### Captain Laureati Sees the King.

CAPT. THE MARQUIS LAUREATI, together with his mechanic, Jonso, was on September 27th received by the King at Buckingham Palace, when he handed to His Majesty the autograph letter from the King of Italy which he had brought from Turin. The Marquis was decorated by the King with the Insignia of membership of the Royal Victorian Order.

### Germans Abandoning Ghisteltes.

"THE statements of captured German aviators are full of interest," writes the correspondent of the *Temps* on the British front. "The aerodrome at Ghisteltes (south-west of Bruges) is now being disbanded because its personnel, which is being bombarded incessantly day and night, will not remain there any longer. Still more serious dissensions prevail between the reconnoitring and chasing squadrons. Non-commissioned officers are now declining to join the Air Service, as, even when they are promoted to be officers, they are systematically ignored by their observers, and because favours and rewards are only given to titled officers, and successes won by non-commissioned officers, or even by officers who have risen from the ranks, are accredited not to them, but to the commander of their squadron."

### Sheffield's Gift to Newfoundland.

THE aeroplane which has been subscribed for by the citizens of Sheffield and presented to Newfoundland as a unit of the Imperial Air Fleet, was formally handed over at Sheffield on Saturday last by the Lord Mayor of Sheffield. The Mistress Cutler (Mrs. Ellis) performed the christening ceremony, and Lady Morris, the wife of the Premier of Newfoundland, attached to the machine a mascot consisting of a caribou's head, cast in light bronze.

Mr. W. A. S. Hewins, M.P., Parliamentary Under-Secretary for the Colonies, representing Mr. Walter Long, accepted the gift, and requested General Sir David Henderson, who represented the Earl of Derby, to take charge of the machine for use on the Western Front. A few minutes later Lord Hugh Cecil, in his uniform as an officer of the R.F.C., went up as a passenger in the machine.

The visitors to Sheffield, in connection with the presentation, were guests of the Master Cutler, and spent the morning inspecting the works of Vickers, Ltd., where they were received by Mr. Douglas Vickers.

### Aviator v. Gunners.

"CERTAINLY our flying men have been doing all in their power to make life intolerable on the German side of the lines," says Mr. Philip Gibbs, writing to the *Daily Telegraph* on September 27th. "One of these birds found a different kind of prey. It was opposite the Australian front, where a team of German gunners were getting a gun away. Our airman flew low over the heads of the gunners and played his machine gun on to them and dropped bombs. He smashed up the gun-limber and laid out the gunners, and the gun remains there still, with the bodies of men and horses around it. To-day out beyond Ypres I saw flights of our men going out again beyond the German lines for that battle in the air which has never ceased since the battle of Flanders two months ago."

### A Present from the Basutos.

THE Secretary of State for the Colonies announces that the High Commissioner for South Africa reports the contribution of a further sum of £10,000 to war funds by the Paramount Chief and the Basuto nation. His Majesty the King has expressed his high appreciation of this gift, which is being used for the purchase of aeroplanes.

# The British Air Service

"PER ARDUA AD ASTRA"

**UNDER this heading are published each week the official announcements of appointments and promotions affecting the Royal Naval Air Service and the Royal Flying Corps (Military Wing) and Central Flying School. These notices are not duplicated. By way of instance, when an appointment to the Royal Naval Air Service is announced by the Admiralty it is published forthwith, but subsequently, when it appears in the LONDON GAZETTE, it is not repeated in this column.**

## Royal Naval Air Service.

Admiralty, September 25th.

The following Prob. Flight Officers (Temp.) have been promoted to rank of Flight Sub-Lieuts. (Temp.), seniority as stated: F. Wood and W. J. Mackenzie; July 21st. W. F. V. Stephenson and G. R. Burge; Aug. 5th. J. G. Clark; Aug. 21st. F. M. Williams and W. J. Peace; Sept. 5th. Sapper C. A. Jones, entered as Prob. Flight Officer (Temp.), seniority Sept. 8th.

The following have been entered as Prob. Flight Officers (Temp.), seniority as follows: J. R. Spaul and H. W. A. Buckley; September 3rd. L. A. Garrett and J. W. P. Wain; Sept. 10th. W. H. Paxman; Sept. 18th.

Admiralty, September 27th.

Late Prob. Flight Officer (Temp.) J. F. V. Sugars, entered as Prob. Officer (Temp.), sen. Oct. 15th, 1916.

Warrant Officer, 2nd Gr. (Temp.) H. R. Hutt, promoted to Prob. Flight Officer (Temp.), sen. Sept. 29th.

Admiralty, September 28th.

The following have been entered as Prob. Flight Officers (Temp.), seniority Sept. 23rd: C. H. Brill, C. G. Clark, J. Denison, C. H. Denny, J. S. Grosvenor, S. J. N. Haigh, C. B. Hutton, W. A. Hughes, R. M. Johnson, P. D. McA. Lingen, J. E. G. Moody, B. Norcross, J. B. Roberts, G. F. Sams, H. G. Sawyer, T. B. Sedgwick, D. T. Simpson, K. Symons, G. V. T. Thomson, J. P. Walker, R. W. Walls, E. F. Waring and H. Wind.

J. Cumberbirch entered as Prob. Flight Officer (Temp.), seniority Sept. 18th. D. Greenwood granted temp. commission as Sub-Lieut. (R.N.V.R.), sen. Sept. 27th.

Admiralty, October 1st.

A. M. Sutherland and D. L. Bawl, both entered as Prob. Flight Officers (Temp.), seniority Sept. 15th.

C. W. Surman granted temporary commission as Sub-Lieut. (R.N.V.R.), seniority Sept. 28th.

## Royal Flying Corps (Military Wing).

London Gazette Supplement, September 25th.

The following appointments are made:—  
**Flight-Commanders.**—Temp. Lieut. H. D. Harman, Gen. List, from a Flying Officer, and to be Temp. Capt. whilst so employed; Sept. 12th.

**Flying Officers.**—Temp. 2nd Lieut. (on prob.) E. H. Peverell, Gen. List, and to be confirmed in his rank; July 19th. Temp. Lieut. H. E. Dolan, M.C., R.A., and transferred to R.F.C., Gen. List; 2nd Lieut. (Temp. Lieut.) H. C. Benstead, N. Staff. R. (T.F.), from a Flying Officer (Ob.), seniority from Oct. 6th, 1916; Aug. 31st. Temp. 2nd Lieuts. (on prob.), Gen. List, and to be confirmed in their rank:—D. R. Hunt, H. J. Walkerdine, J. R. Aikins, G. W. Hall, E. McN. Hand, L. P. Watt, V. L. Dowling, J. E. Drummond, S. H. Winkley, L. A. Beadle, H. I. Mahaffy; Sept. 3rd.

**Assistant Instructors in Gunnery (graded as an Equipment Officer, 2nd Class).**—Temp. 2nd Lieut. H. B. Griffith, Gen. List, from a Flying Officer (Ob.), and to be Temp. Lieut. whilst so employed; June 22nd. Graded as an Equipment Officer, 3rd Class.—The appointment of Temp. 2nd Lieut. H. B. Griffith, Gen. List, notified in the Gazette of July 20th, is cancelled.

**Balloon Officers.**—Temp. 2nd Lieuts. (on prob.) Gen. List and to be confirmed in their rank: H. S. Selves; July 12th. A. E. Lowry; Aug. 16th. V. G. Barry; Aug. 23rd. A. A. Harris, G. S. Rogers, B. Thomas; Aug. 30th. 2nd Lieut. (Temp. Lieut.) F. A. Hunter, R.F.A., S.R., from a Flying Officer (Ob.); Temp. 2nd Lieut. O. St. J. Swan, R.A., and to be transferred to R.F.C., Gen. List; Temp. 2nd Lieut. W. G. Ruggins, Gen. List, from an Equipment Officer, 3rd Class; Temp. 2nd Lieut. (on prob.) C. M. Woolger, Gen. List, and to be confirmed in his rank; Sept. 6th.

**Equipment Officers, 2nd Class.**—Lieut. A. H. Guerrer, Yeo, (T.F.), May 18th; 2nd Lieut. (Temp. Lieut.) A. R. Langton, R.F.C. (T.F.), and to be sec'd.; Aug. 30th. From the 3rd Class: 2nd Lieut. (Temp. Lieut.) W. G. Cleg-horn, R.G.A. (T.F.). And to be Temp. Lieuts. while so employed: Temp. 2nd Lieut. H. B. Wakefield, Gen. List; 2nd Lieuts. H. Hoad and R. Clelland, S.R.

**General List.**—The following to be Temp. 2nd Lieuts. (on prob.): A. Jennings, H. Dixon, A. Morrison, W. T. Hawkins, T. Mundy, C. H. Johnston, C. J. Polden, A. H. Angwin, G. Bowden, J. G. Le Brun; Sept. 8th.

**Supplementary to Regular Corps.**—2nd Lieuts. (on prob.) confirmed in their rank: A. A. James, J. H. F. Hamblly, C. B. Charlewood.

**General List (R.F.C.).**—Temp. Lieut. H. H. McIntosh relinquishes his commission on account of medical unfitness for retention in the Corps; Temp. 2nd Lieut. J. C. Weldon resigns his commission with a view to joining an Inf. Offr. Cdt. Bn.; Temp. 2nd Lieut. R. T. Stevenson resigns his commission with a view to joining an Inf. Offr. Cdt. Bn.; Temp. 2nd Lieut. E. H. Griffiths resigns his commission with a view to joining an Inf. Offr. Cdt. Bn. Sept. 26th.

**Cadets to be Temp. 2nd Lieuts. (on prob.)**—Aug. 29th: A. Ball, A. Barnard, S. D. Evans, A. W. McCulloch, C. McW. McWilliam, S. R. Payne, A. Pilling, J. D. Bowman, J. Burt, R. D. Buxton, F. T. Cockburn, H. A. Hudson, T. H. Pyke, C. H. Stocks, F. P. Whittaker, S. S. Wright, R. C. Beffett, W. Dawson, M. Hyslop, H. S. G. Palmer, W. W. Routledge, J. E. Smith, A. F. White, K. J. Yeomans, A. A. Baker, P. J. Baker, R. T. Mackenzie, A. Macinnes, E. J. Mulholland, A. W. Robertson, W. B. T. Ross, S. B. Welch, T. T. Eales, C. J. Hooley, J. Howard, F. Smethurst, R. G. Tunbridge, R. W. Wright, R. Allison, T. Goff, A. Lewis, J. D. McKeogh, O. Price, P. Slattery, F. W. Smith, F. J. Cunningham, L. F. Hodges, P. T. Holligan, R. D. de L. Miller, H. T. Perkins, A. R. S. Proctor, J. S. Rough, J. Russell, J. J. Birkinshaw, E. Cunningham, B. D. R. Davis, W. L. Field, G. D. Green, G. A. Harris, R. T. Ingram, H. J. L. Jones, J. T. D. Margrave, W. T. Morrison, C. S. Armishaw, W. C. Farley, J. Mollison, W. L. Murray, R. Naylor, C. W. Phillips, L. H. Button, N. Clemence, W. A. Curtis, J. C. Fairfax, G. W. D. Fogglin, L. R. Gibbs, L. W. Jameson, J. R. Stamp, T. Sydenham, J. M. Brown, S. W. Bunting, R. J. Gammon, W. P. N. Hudson, R. Livingston, H. Soulsby, T. K. Spencer, P. F. Balch, A. W. Clark, J. S. Hall, W. Jaffray, A. McCullum, S. Moss, T. Robson, W. P. Sutherland, E. Wilman, H. A. Zinn, J. Campbell, E. H. Church, P. E. Dow, H. W. Ford, A. H. Hiscox, M. C. Morton, C. Moss, C. S. Preston, N. C. F. Seaborough, J. N. Boanson, R. Craig, L. D. Nevo, A. V. I. Roberts, C. H. Roberts, L. L. T. Sloat, G. N. Troth, J. C. Holdsworth, A. Ibbotson, A. Miller, E. M. Panzetta, W. Rogers, A. W. A. Wyatt, C. A. Brook, H. E. Browne, G. H. Fozzard, A. J. Garside, J. Morton, A. Sharnan, J. P. Smith, A. C. Weeks, W. D. Farrer, J. D. Ford, E. Jackson, S. F. Legge, J. H. Lenihan, G. L. Pollard, H. L. Taylor, B. H. Fitter, A. H. Fraser, S. D. Good, L. G. Kesterton, H. Warburton, E. Hall, E. N. Lohmeyer, W. F. Ogilvy, J. Paisley, S. Sprenger, J. P. Wardle, A. K. Whiteman.

London Gazette Supplement, September 26th.

The following appointments are made:—

**Wing-Commander.**—Capt. (Temp. Maj.) C. R. S. Bradley, Ind. Cav., from a Sqdn Comdr., and to be Temp. Lieut.-Col. while so employed; June 22nd.

**Flight-Commanders.**—Lieut. W. R. Read, M.C., D. Gds., and to be Temp. Capt. while so employed; Sept. 5th.

**From Flying Officers.**—2nd Lieut. C. A. Stevens, W. Rid. R., and to be Temp. Capt. while so employed; Sept. 11th. Lieut. (Temp. Capt.) I. A. J. Duff, Dorset R. (T.F.); Sept. 12th. The appointment of 2nd Lieut. (Temp. Lieut.) F. T. Woods, North'n R. (T.F.), notified in Gazette of Sept. 11th, is cancelled.

**Flying Officers.**—Temp. Capt. J. L. Middleton, York and Lanc. R., and to be transferred to R.F.C., Gen. List; June 16th. Temp. 2nd Lieut. W. N. Bussell, attd. Midd'x R., and to be transferred to R.F.C., Gen. List; Aug. 21st. 2nd Lieut. E. B. Corry, S. Afr. Inf.; Aug. 29th. Temp. 2nd Lieuts. (on prob.) Gen. List, and to be confirmed in their rank: W. J. Hooke, W. F. Dry, C. S. Dickinson, C. A. Mulligan; Aug. 30th. S. T. Rowe, Maj. A. B. Mason, Canadian Gen. List; Aug. 31st. Lieut. F. G. B. Reynolds, Oxf. and Bucks L.I. (T.F.), from a Flying Officer (Ob.), seniority June 23rd, 1916; Aug. 31st. Temp. 2nd Lieuts. (on prob.), Gen. List, and to be confirmed in their rank:—A. L. King, A. H. Curtis, F. J. Davies; Lt. A. F. E. Pitman, Sea. Highrs. (T.F.), from Acting Capt., Tank Corps, and to be sec'd.; Aug. 31st. Temp. 2nd Lieuts. (on prob.), Gen. List, and to be confirmed in their rank: R. Macintosh; Sept. 1st. D. K. Billings, A. W. Fraser; Sept. 3rd. Temp. 2nd Lieut. G. H. C. Holt, R.A., and to be transferred to R.F.C., Gen. List. Temp. 2nd Lieuts. (on prob.), Gen. List, and to be confirmed in their rank: W. Wild, A. Muir, H. B. Bell, E. G. Higginson, J. A. M. Robertson; Sept. 4th. 2nd Lieut. L. M. Elworthy, Essex R., from a Flying Officer (Ob.) seniority July 9th, 1916. Temp. 2nd Lieuts. (on prob.) Gen. List, and to be confirmed in their rank: G. Birkett, W. S. Hill-Tout, F. L. Watson; Sept. 5th. 2nd Lieut. (Temp. Lieut.) E. W. Monk, Lond. R. (T.F.), from a Flying Officer (Ob.), seniority Sept. 16th, 1916; Capt. R. H. Rusby, Glouc. R. (T.F.), from a Flying Officer (Ob.), seniority Sept. 29th, 1916. Temp. 2nd Lieut. (on prob.), Gen. List, and to be confirmed in their rank: W. G. Mann; Sept. 5th. J. N. Cunningham, G. Bremridge, R. Grice, K. L. Godling; Sept. 6th. S. Reay; Sept. 7th. 2nd Lieut. C. I. Phillips, Glouc. R., and to be sec'd.; Sept. 8th. Temp. 2nd Lieut. J. Ditchfield, Gen. List, Temp. 2nd Lieut. C. T. Walkington, Gen. List; Sept. 14th.

**Adjutants.**—Capt. L. W. David, Yeo. (T.F.), from Welsh R. (T.F.), and to be sec'd.; June 30th. Lieut. C. A. M. Holloway, R.W. Kent R., to be Temp. Capt. (without the pay or allowances of that rank) while so employed, and to be sec'd.; July 6th. Capt. J. E. Vernon, R. Dub. Fus., and to be sec'd.; Capt. F. E. B. Whitfield, Welsh R., S.R., and to be sec'd.; Aug. 28th.

**Park Commanders.**—From Equipment Officers, 1st Class, and to be Temp. Maj. while so employed: Lieut. (Temp. Capt.) J. T. Spittle, S.R.; July 23rd. Temp. Capt. E. J. Howard, Gen. List; Lieut. (Temp. Capt.) A. F. Palmer, S.R.; Lieut. (Temp. Capt.) F. C. Rowe, S.R.; 2nd Lieut. (Temp. Capt.) W. J. Shields, Essex R., S.R.; Aug. 30th.

**Equipment Officers, 1st Class.**—From the 2nd Class, and to be Temp. Capt. while so employed: Temp. Lieut. E. H. Hooper, Gen. List; 2nd Lieut. (Temp. Lieut.) A. E. Blackmore, S.R.; Aug. 30th. Temp. Lieut. T. de la Poer Beresford, Gen. List; Sept. 1st.

**2nd Class.**—From the 3rd Class, and to be Temp. Lieuts. while so employed: Temp. 2nd Lieut. B. W. A. Greenhough, Gen. List; 2nd Lieut. H. F. Groves, North'd Fus. (T.F.); Temp. 2nd Lieut. J. Kirsop, Gen. List; 2nd Lieut. P. R. Hutchinson, S.R.; Temp. 2nd Lieut. A. M. Saywood, Gen. List; 2nd Lieut. C. J. S. Holden, S.R.; 2nd Lieut. L. Tunks, S.R.; Temp. 2nd Lieut. R. E. Cook, Gen. List; Temp. 2nd Lieut. H. Crouch, Gen. List; Aug. 30th.

**3rd Class.**—Temp. Capt. J. D. Fitzgerald, Gen. List; Aug. 27th. **Experimental Officer, 1st Class (graded as an Equipment Officer, 1st Class).**—2nd Lieut. (Temp. Lieut.) W. C. Mitchell, R.F.A., S.R., from the 2nd Class (graded as an Equipment Officer, 2nd Class) and to be Temp. Capt. whilst so employed; July 6th.

**2nd Class (graded as an Equipment Officer, 2nd Class).**—From the 3rd Class (graded as Equipment Officer, 3rd Class) Aug. 30th: Capt. F. W. Musson, N. Lan. R. (T.F.); 2nd Lieut. C. E. Fairburn, S.R., and to be Temp. Lieut. whilst so employed.

**General List.**—2nd Lieut. W. A. Hunter, Yorks L.I., to be Temp. Lieut.; Sept. 1st. The following Temp. 2nd Lieuts. relinquish their commissions on account of physical unsuitability as Pilots or Observers: E. A. Powell, P. Haselock; Sept. 27th. The following Sergeants, from R.F.C. to be Temp. 2nd Lieuts.: C. T. Walkington, J. Ditchfield; Sept. 14th.

**Adjutants.**—Temp. 2nd Lieut. A. E. Morgan, S. Wales Bord., and to be Temp. Capt. (with pay and allowances as Lieut.) whilst so employed, vice Lieut. F. S. Isaac, Worc. R., S.R.; Aug. 31st.

**Supplementary to Regular Corps.**—The notification in the Gazette of Aug. 28th regarding 2nd Lieut. W. F. Trutchley is cancelled.

**General List (R.F.C.).**—Temp. 2nd Lieut. R. I. Simkin resigns his commission with a view to joining an Inf. Offr. Cdt. Bn.; Sept. 9th (substituted for Gazette notification Sept. 8th, page 9,343, incorrectly describing name as Limkin); Temp. 2nd Lieut. A. G. Eckel resigns his commission with a view to joining an Inf. Offr. Cdt. Bn.; Sept. 27th.

London Gazette, Supplement, September 27th.

The following appointments are made:—

**Flight Commander.**—2nd Lieut. K. R. Park, M.C., R.A., from a Flying Officer, and to be Temp. Capt. whilst so employed; Sept. 11th.

**Special Appointments (graded as Flight Commanders whilst holding the appointment).**—Lieut. A. G. Henshaw, Canadian Gen. List, from a Flying Officer and to be Temp. Capt. whilst so employed; July 30th. Lieut. (Temp. Capt.) E. G. Landon, S.R., from a Flight Comdr., and to retain his temp. rank whilst so employed; Aug. 4th.

**Flying Officers.**—Temp. 2nd Lieut. (on prob.) F. H. R. Henwood, Gen. List, and to be confirmed in his rank; July 16th. Temp. 2nd Lieut. J. McF. D. Mills, British W. Indies R.; July 18th. Temp. 2nd Lieuts. (on prob.), Gen. List, and to be confirmed in their rank: R. S. M. Bruce; July 23rd. A. Eckley, E. Brewer; July 24th. 2nd Lieut. (on prob.) T. L. Gitsam, S.R.; Temp. 2nd Lieut. (on prob.) E. L. Gresley-Cox, Gen. List, and to be confirmed in his rank; Lieut. J. H. Parnell-McGarry, Essex R., T.F., and to be sec'd.; July 25th. Temp. 2nd Lieut. (on prob.) J. V. Southon, Gen. List, and to be confirmed in his rank; July 26th. Temp. 2nd Lieut. P. C. Hunter, attd. N. Staff R., and to be transfd. to R.F.C., Gen. List; July 27th. Temp. 2nd Lieut. L. M. Iles, R.A., and to be transfd. to R.F.C. Gen. List; Temp. Lieut. G. C. O'Donnell, Liens. R., and to be transfd. to R.F.C. Gen. List; Temp. 2nd Lieut. E. L. Pratt, attd. Sco. Rif., and to be transfd. to R.F.C., Gen. List:



2nd Lieut. W. J. Brown, Cam'n Highrs., T.F., from attd. Lond. R., T.F., and to be secd.; July 31st. 2nd Lieut. (Temp. Lieut.) D. N. Thomson, M.C., Yeo., T.F., from a Flying Officer (Ob.); Aug. 2nd, sen. from July 23rd, 1916. 2nd Lieut. A. G. Kaye, Ches. R., T.F., and to be secd.; Aug. 2nd. Temp. 2nd Lieut. Q. E. McConnell, attd. Oxf. and Bucks L.I., and to be transd. to R.F.C., Gen. List; Aug. 4th.

2nd Lieut. J. A. Rutherford, R.G.A., S.R.; 2nd Lieut. A. MacL. MacElwee, Arg. and Suth'd Highrs., T.F., and to be secd.; Temp. 2nd Lieut. H. J. Gates, E. Kent R., from attd. British W. Indies R.; Aug. 5th. Temp. Capt. G. C. Wall, attd. K.R. Rif. C., and to be transd. to R.F.C., Gen. List; Aug. 14th. Temp. Capt. H. R. Jones, Manch. R., and to be transd. to R.F.C., Gen. List; Lieut. J. J. Little, R.G.A., T.F.; Aug. 7th. Capt. J. R. Stewart, High. L.I., T.F., and to be secd.; 2nd Lieut. W. A. P. Sprott, Bord. R., and to be secd.; Temp. 2nd Lieut. H. McKenzie, attd. R. Sc. Fus., and to be transd. to R.F.C., Gen. List; Aug. 8th. Temp. 2nd Lieuts. (on prob.), Gen. List, and to be confirmed in their rank: H. J. Stone; Sept. 4th. R. B. Slade; Sept. 5th. Temp. Lieut. J. F. Downing, Gen. List, from a Flying Officer (Ob.), sen. from Dec. 8th, 1916; 2nd Lieut. (on prob.) D. French, S.R.; Temp. 2nd Lieut. (on prob.) R. C. Wade, Gen. List, and to be confirmed in his rank; Sept. 6th.

*Instructor in Gunnery (graded as an Equipment Officer, 1st Class).—Temp. Lieut. B. D. Capper, Gen. List, from an Asst. Instr. in Gunnery (graded as an Equipment Officer, 2nd Cl.), and to be Temp. Capt. whilst so employed; Sept. 4th.*

*Assistant Instructor in Gunnery (graded as an Equipment Officer, 2nd Class).—Temp. 2nd Lieut. T. O. C. Pease, Gen. List, from an Asst. Instr. in Gunnery (graded as an Equipment Officer, 3rd Cl.), and to be Temp. Lieut. whilst so employed; Sept. 4th.*

*Balloon Company Commander (graded as a Flight Commander).—Temp. Capt. H. V. Knox, Gen. List, from a Balloon Comdr. (graded as Balloon Officer); Aug. 14th.*

*Balloon Commander (graded as a Balloon Officer).—Lieut. R. J. Jameson, S.R., from a Balloon Officer; Sept. 7th.*

*Equipment Officers, 3rd Class.—Temp. 2nd Lieuts., Gen. List: P. Ellis, July 4th. C. M. Seth-Ward; July 16th. J. M. Bell; July 18th. H. N. Sandys; Aug. 4th. R. C. Cox; Aug. 16th. 2nd Lieut. F. N. D. Masters, R.F.A., T.F., and to be secd.; Aug. 1st. To be Temp. Capt. (without pay or allowances of that rank) whilst specially employed: 2nd Lieut. F. O. Sonderby, S.R.; Temp. 2nd Lieut. P. Seymour, Gen. List; Sept. 28th.*

#### Schools of Military Aeronautics.

*Assistant Instructor (graded as an Equipment Officer, 2nd Class).—Lieut. G. R. Spencer, Lan. Fus., S.R., from a Flying Officer (Ob.); Sept. 5th.*

*General List.—To be Temp. 2nd Lieuts.: P. Ellis; July 4th. C. M. Seth-Ward; July 16th. J. M. Bell; July 18th. H. N. Sandys; Aug. 4th. R. C. Cox; Aug. 16th. To be Temp. 2nd Lieuts. (on prob.): Cadet G. A. Bosanquet, Co. Qmtr. Sergt. C. Lyons, from Lond. R., T.F.; Sept. 8th. J. J. Dwyer; Sept. 10th. F. O. Brownson; Sept. 17th.*

*Cadets to be Temp. 2nd Lieuts. (on prob.): D. C. Bispham, R. Boosey, C. N. Boyd, W. E. Burrill, F. G. Burslem, J. Cann-Lippincott, R. B. Carey, J. M. Cullen, R. M. Darney, S. A. Dismore, P. L. Evans, T. H. Forrest, E. T. Hall, J. Herrera, S. Mack, Litten, E. G. Luscombe, W. J. McSweeney, C. R. Martin, G. Norton, J. Potts, J. W. Ratcliffe, G. L. Rutherford, S. L. Skevington, A. C. P. Stephenson, A. F. Stevens, R. W. Stobart, E. I. Sutcliffe, H. I. A. T. Templeton, C. E. Tidy, A. N. Tuck, F. E. Upton-Smith, R. Wilde, S. Y. Proudfoot, W. F. Russell; Sept. 23rd.*

#### London Gazette Supplement, September 28th.

*Staff Officer, 3rd Class (graded as a Staff Captain).—The date of the appointment of Lieut. (now Capt.) A. J. W. Barmby, York. R., is July 14th, and not as in the Gazette of Sept. 11th.*

The following appointments are made:—

*Flight-Commanders.—From Flying Officers, and to be Temp. Capt. whilst so employed: Temp. Lieut. D. W. Clappen, Gen. List; Sept. 11th. 2nd Lieut. C. G. O. MacAndrew, Yeo. (T.F.); Sept. 12th. The appointment of Capt. E. A. de Pass, Yeo. (T.F.), notified in the Gazette of July 4th, is ante-dated to May 16th.*

*Flying Officers.—Temp. 2nd Lieuts. (on prob.), Gen. List, and to be confirmed in their rank: A. B. Carmody, A. H. Cocking, G. H. Harding, O. Thamer; Aug. 11th. R. W. Tilbury; Aug. 26th. 2nd Lieut. J. C. Ballard, R.F.A. (T.F.), and to be secd.; Temp. 2nd Lieuts. (on prob.), Gen. List, and to be confirmed in their rank: A. L. Fiddament, W. C. Gilbert, C. L. King; Aug. 31st. D. McC. Rawcliffe; Sept. 3rd. Temp. Lieut. H. Toulmin, M.C., attd. N. Lan. R., and to be transd. to R.F.C., Gen. List. Temp. 2nd Lieuts. (on prob.), Gen. List, and to be confirmed in their rank: R. B. T. Hedges, E. E. Ashton, P. H. Burt, D. E. B. K. Shipwright; Sept. 6th. Temp. Lieut. G. E. Gibbons, Gen. List, from a Flying Officer (Ob.), seniority Nov. 15th 1916; Temp. 2nd Lieuts. (on prob.), Gen. List, and to be confirmed in their rank: E. A. Clegg, C. B. E. Lloyd; Sept. 7th. Temp. Capt. J. Line, A.S.C.; Lieut. R. M. C. Macfarlane, R.A., from a Flying Officer (Ob.), seniority Sept. 21st, 1916; 2nd Lieut. F. W. Burdick, A. Cyclist Corps, from a Flying Officer (Ob.), seniority Oct. 28th, 1916; 2nd Lieut. W. J. Murphy, Bord. R., and to be secd.; Temp. 2nd Lieut. (on prob.) G. W. Forbes, Gen. List, and to be confirmed in his rank; Temp. Lieut. E. Thornton, Gen. List, from a Flying Officer (Ob.), seniority Nov. 7th. Temp. 2nd Lieuts. (on prob.), Gen. List, and to be confirmed in their rank: F. C. A. Thorpe, F. J. Bull, A. H. Hill, T. Colvill-Jones, T. B. Fenwick, H. G. Robinson; Sept. 8th.*

*Flying Officers (Observers).—2nd Lieut. J. W. D. Melhuish, M.C., Worc. R. (T.F.), seniority Aug. 7th, and to be secd.; 2nd Lieut. W. A. Knight, R.F.A., S.R., seniority Aug. 5th; Sept. 9th. The date of seniority of 2nd Lieut. (Temp. Lieut.) C. R. Davidson, High. L.I., is Mar. 6th, 1916, and not as in the Gazette of July 23rd, 1916.*

*Balloon Company Commander (graded as a Flight-Commander).—Temp. Lieut. V. D. Drury, R.E., from a Balloon Comdr. (graded as a Balloon Officer), and to be Temp. Capt. whilst so employed; Aug. 14th.*

*Special Appointment (graded as a Park Commander).—Temp. Capt. A. H. S. MacCallum, Gen. List, from an Equipment Officer, 1st Cl., and to be Temp. Major whilst so employed; Aug. 17th.*

*Equipment Officers, 1st Class.—Major T. O. H. Lees, R. Mar. L.I.; Aug. 1st. And to be Temp. Capt. whilst so employed: 2nd Lieut. (Temp. Lieut.) A. C. Day, S.R., from a Special Appointment (graded as an Equipment Officer, 2nd Cl.); Aug. 17th. Lieut. T. G. Mellanby, S.R., from the 2nd Cl.; Sept. 12th.*

*2nd Class.—From the 3rd Cl., and to be Temp. Lieuts. whilst so employed: Temp. 2nd Lieut. B. C. Rayner, Gen. List; 2nd Lieut. A. L. Thomas, S.R.; Aug. 17th. Temp. 2nd Lieut. H. D. P. Jehring, Gen. List, and to be Temp. Lieut. whilst so employed; Sept. 14th.*

*General List.—The following Temp. 2nd Lieuts. relinquish their commissions on account of physical unsuitability as Pilots or Obs.: H. P. Greenhill, E. K. Jones, F. L. Goldby, J. W. Swaby, W. H. Hudson; Sept. 29th. To be Temp. 2nd Lieuts. (on prob.): F. D. Hudson, J. H. Summers; June 26th. I. F. Fletcher, D. B. Hartle, R. T. Hall, F. C. Gilbert, S. Grossberg, W. H. Bickell, G. C. Logan, W. E. Gilbert, L. J. Williams, A. B. Reade, A. D. Purvis, D. R. MacLaren, W. G. MacKenzie, H. A. Marshall, B. T. Davidson, R. E. Norman, A. F. Smith, R. J. Gilroy, F. W. Kemp, C. E. Lind, H. S. Morton, W. R. Cutler, R. K. McConnell, W. T. Kuschke, J. E. Sydie, A. R. McPherson,*

*E. F. H. Davis, J. A. Scott, W. C. Daniel, A. A. McLeod, W. J. Prier, H. G. Ross, J. V. Sorsoleil, J. L. Armstrong, J. E. Croden, M. G. Le Marchant, R. S. MacGregor, L. D. Sisley, W. B. Banfield, C. L. Hilborn, J. M. McCallum, F. F. H. Reilly, G. R. Howsam, R. L. Clapp, F. W. Dogherty; Aug. 19th.*

#### London Gazette Supplement, September 29th.

The following appointments are made:—

*Flight-Commanders.—From Flying Officers, and to be Temp. Capt. whilst so employed: Temp. 2nd Lieut. E. R. Pennell, Gen. List; Sept. 1st. Temp. Lieut. G. B. Crole, Gen. List; Sept. 13th. Temp. Lieut. F. J. Gibbs, S. Staff. R.; Sept. 15th.*

*Flying Officers.—Temp. 2nd Lieut. A. Hughes, Gen. List, from a Flying Officer (Ob.), seniority April 16th, 1916. Temp. 2nd Lieuts. (on prob.), Gen. List, and to be confirmed in their rank: R. MacDonald, A. D. Simmons; Sept. 4th. 2nd Lieut. L. Titchener, R. Lanc. R. (T.F.), and to be secd.; 2nd Lieut. A. J. Warwick, Glouc. R. (T.F.), and to be secd.; Sept. 6th. Temp. 2nd Lieuts. (on prob.), Gen. List, and to be confirmed in their rank: S. E. Lawrence, G. A. C. Manley; Sept. 8th.*

*Flying Officers (Observers).—2nd Lieut. (on prob.) H. B. Lilley, S.R.; Sept. 7th, seniority June 11th. Temp. 2nd Lieut. F. W. Field, W. York. R., seniority July 19th, and to be transd. to R.F.C., Gen. List; Temp. 2nd Lieut. C. E. Kennedy, Manch. R., seniority July 19th, and to be transd. to R.F.C., Gen. List; Lieut. A. A. Browne, N. Zealand Mil. Forces, seniority July 25th; Sept. 12th. Temp. Lieut. F. L. McCreasy, S. Lan. R.; Sept. 13th, seniority Aug. 1st, and to be transd. to R.F.C., Gen. List.*

*Park Commander.—Temp. Capt. G. H. Padley, Gen. List, from an Equipment Officer, 1st Cl., and to be Temp. Major whilst so employed; June 1st.*

*Equipment Officers, 2nd Class.—From the 3rd Cl.: 2nd Lieut. F. A. Roberts, S.R., and to be Temp. Lieut. whilst so employed; Sept. 8th. Lieut. L. F. Peaty, S.R.; Sept. 12th. 2nd Lieut. (Temp. Lieut.) G. T. Beer, Devon R. (T.F.); Temp. Lieut. H. L. Woolveridge, Gen. List; Sept. 14th.*

*3rd Class.—Temp. 2nd Lieut. L. A. Lavender, Gen. List; Aug. 5th. Temp. 2nd Lieuts. (on prob.), Gen. List, and to be confirmed in their rank: A. Davies, T. E. Norton, P. D. Stonham; Sept. 1st.*

#### Schools of Instruction (School of Technical Training).

*Commandants (graded as Depot Commanders).—Major (Temp. Lieut.-Col.) I. M. Bonham-Carter, North'd. Fus., from a Comdt. (graded as a Wing Comdr.) of a School of Mil. Aeronautics, and to be Temp. Col. whilst so employed; Temp. Capt. (Temp. Major) L. Sadler, A.S.C., from an Insp. of Technical Training (graded as a Park Comdr.), and to be Temp. Lieut.-Col. whilst so employed; Sept. 10th.*

*Assistant Commandant (graded as a Park Commander).—Capt. H. L. Nixon, R. Lanc. R., S.R., to be secd. and to be Temp. Major whilst so employed; Sept. 10th.*

*General List.—Temp. 2nd Lieuts. to be Temp. Lieuts.: H. A. T. Trier, W. Anderson, C. J. Marchant, C. A. Bourne, C. Curtis, H. P. Bramwell, H. F. Darby, J. W. Baker; Mar. 1st. Temp. 2nd Lieuts. to be Temp. Lieuts.: R. S. Rudd, Devon. R.; A. W. Brittain, Notts and Derby R.; A. D. C. Browne, R. Innis. Fus.; Mar. 1st. C. S. Willmott to be Temp. 2nd Lieut.; July 16th.*

#### London Gazette Supplement, October 1st.

The following appointments are made:—

*Flight-Commanders.—From Flying Officers, and to be Temp. Capt. whilst so employed:—Sept. 14th: Lieut. W. F. Anderson, S.R.; Temp. 2nd Lieut. W. H. N. Shakespeare, Gen. List; 2nd Lieut. (Temp. Lieut.) J. B. Walmsley, Ind. Inf.; Sept. 15th.*

*Flying Officers.—Temp. 2nd Lieut. F. Young, Gen. List, from a Flying Officer (Ob.); Sept. 1st, seniority Oct. 6th, 1916. Temp. 2nd Lieuts. (on prob.), Gen. List, and to be confirmed in their rank: R. A. Birch; Sept. 7th. H. J. Cryer, J. C. Bateman; Sept. 8th. F. F. Keen, G. Irving, A. W. MacLaughlin; Sept. 9th. Lieut. J. W. Rayner, North'd. Fus., S.R., from a Flying Officer (Ob.), seniority Jan. 18th; Sept. 10th. Temp. 2nd Lieuts. (on prob.), Gen. List, and to be confirmed in their rank: J. G. Horne, I. V. Hunt, J. Kyle.*

*Flying Officers (Observers).—2nd Lieut. I. A. Laing, K.O. Sco. Bord. (T.F.); July 25th, seniority Mar. 20th, and to be secd. 2nd Lieut. H. S. Hill, Linc. R. (T.F.), from attd. S. Lan. R., seniority June 26th, and to be secd.; Lieut. N. E. Wallace, Can. Art., seniority June 27th; Sept. 14th. Lieut. A. N. Leeson, D.S.O., R.A.; July 31st, seniority June 30th, and to be secd. Temp. Lieut. R. B. Sievier, R.A.; Aug. 1st, seniority July 1st, and to be secd. Temp. 2nd Lieut. (on prob.) S. MacC. Peterkin, Gen. List; Sept. 14th, seniority July 24th, and to be confirmed in his rank.*

*Special Appointments (graded as Park Commanders whilst holding Special Appointments, and to be Temporary Majors whilst so employed).—Lieut. (Temp. Capt.) E. W. Eyre, S.R., from an Equip. Officer, 1st Cl.; Aug. 15th. 2nd Lieut. (Temp. Capt.) J. McCrae, Sea. Highrs., from an Equipment Officer, 1st Cl.; Aug. 27th. Temp. Capt. R. de Sarigny, Gen. List, from a Special Appointment (graded as an Equipment Officer, 1st Cl.); Sept. 6th. Graded as Equipment Officers, 1st Class, while holding Special Appointments.—Temp. Lieut. (Temp. Capt.) J. Stewart, R. Sc. Fus., from an Adj., and to retain his temp. rank whilst so employed; Sept. 1st. Lieut. (Temp. Capt.) A. T. Dawson, R.F.A. (T.F.), to be secd., and to retain his temp. rank whilst so employed; Sept. 5th. Temp. 2nd Lieut. A. F. Livingstone, Gen. List, from a Flying Officer, and to be Temp. Capt. whilst so employed; Sept. 7th.*

*General List.—2nd Lieuts. to be Temp. Lieuts. while employed with R.F.C. W. H. Hargreaves, Middx. R.; I. M. Davies, Welsh R.; H. Richardson, Norf. R.; L. H. Browning, R.A.; R. S. Lewis, R.A.; N. G. Pring, R.A.; F. G. C. Wear, E. Kent R.; J. H. Morris, R.A.; J. E. G. O'Byrne, R. Muns. Fus.; H. E. Tansley, M.C., K.R.R.C.; T. G. Beale, D. Gds.; C. E. Jessel, Wilts. R.; F. J. Gill, K.R.R.C.; C. W. Busk, M.C., Suff. R.; P. N. Shone, S. Staff. R.; F. L. Harding, Som. L.I.; A. F. Barker, Hamps. R.; M. Tod, R. Highrs.; V. Westerby, R.A.; H. B. Harvey, R.A.; H. V. Robbins, Bord. R.; R. J. Macpherson, Dorset R.; A. D. K. Perkins, R. Ir. Fus.; Sept. 1st. 2nd Lieuts. S.R., to be Temp. Lieuts. while employed with R.F.C.: R. S. Payne, R. Ir. R.; B. K. O. Mathews, Northn. R.; J. R. Statter, Som. L.I.; W. Burchell-Crookes, R.G.A.; D. Alliban, Notts and Derby R.; R. M. Rankin, Sco. Rif.; W. S. Mansell, E. Surr. R.; E. L. French, R. Ir. Rif.; L. G. Paling, Notts and Derby R.; G. A. Hill, Manch. R.; P. W. Spurr, R. Berks. R.; C. C. French, R.F.A.; A. W. Saunders, R.F.A.; E. T. H. Hearn, R.F.A.; E. J. O'ff. Ross, Middx. R.; C. O. Wright, R. Lanc. R.; F. R. Pender, R. Fus.; S. D. Chard, Northd. Fus.; L. F. G. Spencer, Sea. Highrs.; L. P. Sedgwick, E. Surr. R.; E. J. Halliwell, R.F.A.; A. W. Robinson, E. Surr. R.; S. E. Backus, R.F.A.; E. L. Walters, Devon R.; I. M. Harris, K.R.R.C.; P. Dalrymple-Willes, R. Lanc. R.; M. L. Hatch, R.F.A.; R. B. Ashcroft, Notts and Derby R.; I. A. Johnson-Gilbert, High. L.I.; Sept. 1st. Temp. 2nd Lieuts. to be Temp. Lieuts. whilst employed with R.F.C.: A. S. Goodwin, K.O. Sco. Bord.; July 1st. J. Durward, from attd. High. L.I.; J. W. Ferguson, K.O. Sco. Bord.; J. P. Morkam, Northn. R.; J. F. Manning, from attd. Middx. R.; H. C. Douglas, from attd. R. Muns. Fus.; J. McG. Glen, R. Scots; A. F. Goodchap, Glouc. R.; A. Daws, R. Scots; C. Muller-Chateau, from attd. K.R.R.C.; W. B. Cooke, from attd. E. Surr. R.; W. N. Bussell, from attd. Middx. R.; W. H. Winter, R.W. Surr. R.; J. R. Hodgkinson, W. York. R.; M. E. Mealing, Shrops. L.I.; Sept. 1st. Temp. 2nd Lieut. J. Montgomery resigns his commission; Oct. 2nd. L. J. Grant, late Capt., S. Rhodesian R. to be Temp. 2nd Lieut. (on prob.); Sept. 6th.*

## "X" AIRCRAFT RAIDS.

IN view of the decision of the Government not to allow details of places visited by enemy aircraft to be published, we are, as before, giving to each one an index number. Eventually, when details are available, we shall give the respective information under these index numbers, which will facilitate easy reference to each particular raid.

### "X" 75 Raid (September 25th).

The following *communiqués* have been issued by the Field-Marshal Commanding-in-Chief, Home Forces:—

"September 25th, 9.40 p.m.

"The Thames estuary was again the objective of a hostile air raid this evening. The Kent and Essex coast was crossed at various points, and a few bombs were dropped. No casualties have been reported. One raider penetrated as far as the south-eastern outskirts of London, where two bombs fell, causing some 20 casualties."

"September 26th, 11.30 a.m.

"Latest reports show that the first group of raiders which approached London last night were turned back by gunfire, not more than two machines actually penetrating the defences. These machines dropped a number of bombs in the South-Eastern outskirts of London at 7.45 p.m., which damaged some dwelling houses, killing six and injuring 16 persons. A second group of raiders, which approached London half an hour later, were driven off. Bombs were dropped in various localities in South-East England. Up to the present no casualties or damage have been reported."

"Later.

"The latest police reports show that in last night's air raid seven persons were killed and 25 injured in all districts."

#### German Version.

"Berlin, September 26th.

"In the evening our aviators again attacked London and the English coastal towns on both sides of the Channel. Bombs dropped on Ramsgate, Margate, Dover, as well as on Boulogne, Calais, Gravelines, and Dunkirk, were observed to have incendiary effect. One of our aeroplanes did not return."

### "X" 76 Raid (September 28th).

"September 28th, 10.50 p.m.

"Hostile aeroplanes attacked the South-East Coast this evening. Raiders were reported at various points along the coast of Suffolk, Essex and Kent. The majority of the raiders did not venture far inland. A few of them headed towards London, but failed to reach the metropolis. Bombs were dropped in Suffolk, Essex and Kent. No reports as to casualties or damage have yet been received."

"September 29th, 11.30 a.m.

"Latest reports indicate that about twenty enemy machines participated in last night's raid. Repeated attacks were made upon London, but in no case did the raiders penetrate the outer defences. Bombs were dropped in a number of places in Kent, Essex and Suffolk, but no casualties and only insignificant damage has been reported up to the present. One enemy aeroplane is reported to have been shot down in the Thames Estuary and a second off the coast."

#### German Version.

"London and several places on the English south coast were attacked by bombs by our aviators."

### "X" 77 Raid (September 29th).

"September 29th, 10.30 p.m.

"Hostile aeroplanes crossed the coasts of Kent and Essex in groups between 8 and 9 p.m. Several attacks were made upon London, and some bombs were dropped in the North-Eastern and South-Eastern districts. Bombs were also dropped at various places in Kent and Essex. No reports of casualties or damage have yet been received."

"September 30th, 12.10 p.m.

"Latest reports show that a determined and simultaneous attack was made upon London by three groups of raiders. Each of these groups, which approached from different directions, was broken up by anti-aircraft gunfire, and only two, at most three, machines penetrated the defences. Bombs were dropped in the North-Eastern and South-Eastern districts. A fourth group of enemy machines which

attempted to approach London later was driven off, none of the raiders penetrating the outer defences of the capital. Bombs were also dropped at various places in Kent and Essex. Full reports of casualties and damage have not yet been received, but both are believed to be comparatively light."

"September 30th, 4.10 p.m.

"Police reports state that the casualties in last night's air raid in all districts visited by enemy aeroplanes were: Killed, 11; injured, 82. Material damage was not great."

#### German Version.

"Our aviators again attacked the docks and warehouses in London, as well as Ramsgate, Sheerness, and Margate. The effect of the bombs was recognisable by the conflagrations caused. The aeroplanes all returned undamaged."

### "X" 78 Raid (September 30th).

"September 30th, 9.50 p.m.

"Two groups of enemy machines, followed by others flying singly, crossed the Kent and Essex coast between 6.40 and 8 p.m.; they came towards London. About ten penetrated the outer defences, but only four or five got through to London itself. Bombs are reported to have been dropped in Kent and Essex and also in London. No details as to casualties or damage have yet been received."

"October 1st, 1.10 p.m.

"Latest reports state that the casualties in last night's air raid in all districts were: Killed, 9; injured, 42. Only two persons were killed in London. Material damage was not great. One enemy machine is reported to have been brought down off Dover."

#### German Version.

"Our airmen again dropped bombs upon the military buildings and warehouses in inner London. Numerous fires showed this attack to be particularly effective. Other aeroplanes successfully attacked Margate and Dover. All our machines returned unharmed."

### "X" 79 Raid (October 1st).

"October 1st, 10.25 p.m.

"A group of hostile aeroplanes crossed the Essex Coast about 7 p.m., and proceeded across Essex towards London. This group of machines was followed at about a quarter of an hour's interval by a second, which pursued the same course. The first attack on London was delivered from the North-East at about 7.45 p.m. Most of the raiders were turned back, but one or more machines penetrated the defences and dropped bombs in the South-Western district at about 8.15 p.m. The second group of raiders attempted to cross the defences at various points in the North-East and North of London, but without success until shortly after 9 p.m., when a few of the machines passed across London. Bombs were again dropped in the South-Western district. Meanwhile a third group of raiders crossed the Kentish coast and dropped bombs at various places. This group did not penetrate far westwards. A fourth group of enemy machines crossed the Essex Coast about 8.50 p.m. and proceeded towards London, which was approached shortly before 10 p.m. They did not penetrate further than the North-Eastern outskirts of London, where some bombs are reported to have been dropped. No reports of casualties or damage have yet been received."

"October 2nd, 12.15 p.m.

"The latest police reports state that in last night's air raid the casualties in all districts visited by the raiders were: killed, 10; injured, 38."

#### German Version.

"Last night London, Sheerness, Ramsgate, and Dover were once again attacked by our aviators."

### "X" 74 Raid.

#### German Version.

"During the night of September 24th a strong air squadron carried out, with visibly good effect, a raid on the fortified places and military and industrial establishments of the Humber region, between Scarborough and Boston. A number of fires and the collapse of buildings were observed. All our airships returned undamaged, notwithstanding the enemy defences by land and sea."

### Aerial Ambulances.

"INTERESTING experiments in the transport of wounded by aeroplane have been carried out at Villacoublay by Dr. Chassaing, the deputy of Puy de Dome," writes the *Daily Mail* correspondent in Paris. "An aeroplane of standard type adapted to carry two stretchers in a closed compart-

ment was used, and even at a speed of 80 miles an hour no vibration or discomfort was felt by the persons who represented the wounded. Dr. Chassaing believes that air ambulances would render great services in cases of stomach wounds, where every minute saved is of great importance. They would fly at a height of only about 500 ft., so that the red cross would be plainly visible."



# Personals.

## Casualties.

Second Lieutenant JOHN LANCASHIRE BARLOW, R.F.C., who was killed on September 23rd, aged 18, was the second son of Mr. and Mrs. Alexander Barlow, of Wivenhoe Hall, Essex. He was educated at Mr. Brown's School, Eastbourne, and at Shrewsbury School, and joined the 8th Essex Cyclist Battalion on August 4th, 1914, at the age of 15. He secured his pilot's certificate at the Bournemouth School and later joined the Wells Aviation Co., until ordered to the R.F.C. Cadet Corps. On reaching the age of 18 he was gazetted to a commission in the R.F.C. He had served four months at the Front as a scout flyer, taking part in the battle of Messines and many other fights.

Lieutenant ROBERT DUDLEY WILSON MCKERGOW, Dragoon Guards, attached R.F.C., elder son of Lieutenant-Colonel McKergow, (Queen's Own) Royal West Kent Regiment, and Mrs. McKergow, of Twineham Grange, Sussex, was killed in action while flying on September 21st. Born in 1898, and educated at Rottingdean School and Uppingham, he entered Sandhurst in May, 1915, and was gazetted to the Dragoon Guards on October 20th, 1915. He joined the R.F.C. as an Observer on September 13th, 1916, and served four months in France, returning to England to obtain his pilot's certificate. He returned to the Front on August 11th last.

Second Lieutenant ARTHUR REX BURDEN NOSS, M.C., R.F.C., only child of Mr. and Mrs. A. A. Noss, of 2, Dickenson Road, Crouch Hill, N., has died of wounds. He was educated at Herne Bay, and in his last year there won eight prizes in the athletic sports.

Second Lieutenant NOEL CHARLES WHITTALL, Royal Fusiliers, attached R.F.C., who was killed on September 13th, was the eldest son of Mr. and Mrs. F. J. Whittall, of 11, Torridon Road, Hither Green, S.E. Born in 1896, he was educated at Claremont House School, afterwards passing to St. Dunstan's College, which he left at the age of 17 to enter the works of Messrs. Elliott Brothers, Ltd., electrical engineers, of Lewisham, remaining there until taking a commission in June, 1915. After seeing active service on the Western front for twelve months, he transferred to the R.F.C., and came home last July to complete his training, leaving again for the front on August 14th last. Early this month in an air fight he encountered four enemy aeroplanes, and after firing 200 rounds of ammunition, succeeded in bringing down a Hun machine and dispersing the remainder.

Second Lieutenant VICTOR CHARLES EDELSTEN BRACEY, who was killed while flying in Hampshire on September 23rd last, was educated at St. Peter's School, Weston-super-Mare, and at Blundell's School, Tiverton. He obtained his commission in the R.F.C. in February last, and his wings last July. He was 19 years of age, and the son of Lieutenant (hon. retired) William Edelsten Bracey, R.A.M.C., and Mrs. Bracey, of Wedmore, Somersetshire.

Captain LEWIS SCOTT WHITE, M.C., who was killed in a flying accident at Wantage on September 28th, in his twenty-

second year, was the youngest son of Mr. Edmund White, M.B., of Green Park, Bath, and was educated at Victoria College, Grosvenor. He always took a keen interest in aviation, and was a prominent member of the Bath Aerial Club. He entered the R.F.C. as a Mechanic in October, 1914, and, receiving a commission, was gazetted Captain on May 5th last. It was only Wednesday of last week that he attended an Investiture at Buckingham Palace, and was decorated by the King with the M.C. For the last two months Capt. White had been Flight-Commander of a flying squadron training at home, but was returning to the Front in a few days.

## Married and to be Married.

A marriage is arranged between Captain CHARLES WILLIAM DE ROEMER, R.F.A., attached R.F.C., only son of Major and Mrs. de Roemer, Lime Park, Hurstmonceux, Sussex, and AUDREY, eldest daughter of the late Charles Lyon LIDDELL and Mrs. Liddell, Place House, Peasmarsh, Sussex.

The marriage took place on October 1st at Lincoln of Captain G. H. HALL, Yeomanry and R.F.C., eldest son of Sir Henry Hall, I.S.O., and Lady Hall, of Chester, and Miss M. G. WELLS-COLE, younger daughter of the late G. F. Wells-Cole and Mrs. Wells-Cole, of Stones Place, Lincoln.

An engagement is announced between Captain A. G. A. HODGES, Northampton Regiment and R.F.C., elder son of the Rev. H. A. and Mrs. Hodges, Barrow-on-Trent, Derby, and MARGARET ENID, elder daughter of Mr. and Mrs. R. J. Cracknell, 61, Babington Road, Streatham, London, S.W.

A marriage has been arranged between Mr. NORMAN F. W. ROCKEY, Lieutenant, R.F.C., second son of Mr. W. Rockey, M.L.A., and of Mrs. Rockey, of Johannesburg, South Africa, and EMMA, only daughter of Mr. Duncan STEWART, Millhills, Crieff, and of Mrs. Duncan Stewart.

## Item.

SIR GEORGE WHITE, Bt., chairman of the Bristol Tramways Co., Imperial Tramways Co., and British and Colonial Aeroplane Co., makers of the famous Bristol machines, and president of the Royal Infirmary, Bristol, and Queen Victoria Hospital, left, exclusive of property settled in his lifetime, estate proved at £185,000, net personalty £137,000. The estate is divided between the only son, Sir Stanley, and the only daughter, Mrs. Ernest Hudson, wife of a member of a well-known firm of soap manufacturers. The late baronet gave a princely sum in his lifetime to the Bristol Infirmary and the vice-hospital, at the latter of which he succeeded the late Sir Blundell Maple.

THE will of Second Lieutenant Robert Grant, junr., R.F.C., of Prestwick, killed in the war, has been proved at £1,076. The will of Lieutenant Michael James Jestyn Spencer, R.F.C., of Newburn-on-Tyne, killed in action, has been sworn at £1,038.

THE will of Lieutenant James Westhall Brown, Highland Brigade, R.F.A., attached R.F.C., killed in France, has been sworn at £754.

## Fatal Accidents.

Two pilots were killed as the result of a collision in mid-air at an Essex aerodrome on September 27th. At the inquest it was stated that the machine containing the two officers who were killed—Lieut. A. S. Talbot, R.F.C., and Lieut. G. Malcolm, K.O.Y.L.I. and R.F.C.—was making a spiral descent, and the collision occurred about 600 ft. from the ground. Both machines came to earth with a crash, and the two officers were killed instantly. The pilot of the other machine had a thigh broken. A verdict of "Accidental Death" was returned.

An inquest was held at South Darenth on September 27th on Lieut. F. G. Litchfield, who was killed by the falling of his machine on the afternoon of September 24th. A verdict of "Accidental Death" was returned.

Capt. White, M.C., was killed in a flying accident at Wantage on the afternoon of September 28th. A new machine was being sent to an aerodrome, and the pilot having engine

trouble descended near Wantage. Capt. White later arrived from the aerodrome and went up in the machine. Soon afterwards the aeroplane crashed to earth, and the Captain died almost immediately after being extricated from the wreckage.

## The Fate of Captain Guynemer.

THERE now, unfortunately, seems little doubt that Capt. Guynemer, the famous French pilot, is dead. The Germans have announced in the *Gazette des Ardennes* that he was killed about 800 yards east of the cemetery of Poelcapelle. It is said that a German sergeant found there a one-seater, with a wing broken and the pilot dead from a bullet wound in the head, and on him an identity disc with the name "Georges Guynemer."

Capt. Guynemer had brought down no less than 53 enemy machines and had been decorated by the French Government with the Legion d'Honneur, the Medaille Militaire and the Croix de Guerre. He had also received decorations from the Russian and other Governments.

# AIRCRAFT WORK AT THE FRONT.

## OFFICIAL INFORMATION.

### British.

*Admiralty, September 24th.*  
"With reference to the German wireless message reporting that an English monitor had bombarded Ostend, and that a few shells had struck the cathedral, killing seven and wounding 24 Belgians, a careful examination of the photographs taken of Ostend after the bombardment show no signs of a hit on the cathedral.  
"On the other hand, the photographs indicate clearly that one floating dock has sunk and heeled over, one workshop in the dockyard has been completely demolished, and seven others damaged, and that a portion of one submarine shelter is missing."

*General Headquarters, September 24th.*  
"On the 23rd inst. there was again a slight lull in aerial operations, though our aeroplanes and balloons continued to observe for our artillery. Successful bombing raids were also undertaken, in the course of which aeroplanes dropped 167 bombs on hostile billets, hutments, and aerodromes.  
"In air fighting eight enemy machines were brought down and six were driven down out of control. Another hostile machine was brought down by us on the 22nd inst. in addition to those already reported for that day. Three of our machines are missing."

*Admiralty, September 25th.*  
"During the morning of the 24th inst. a bombing raid was made by naval aircraft on Varsenaere aerodrome. A large number of bombs were dropped, mostly falling amongst the sheds and hangars, and also among the aeroplanes lined up on aerodrome.  
"On the same day a fighter patrol met a large formation of Albatros scouts, and one enemy machine was destroyed, and another driven down completely out of control. All our machines returned safely."

*General Headquarters, September 25th.*  
"On the 24th inst., in spite of thick mist which hung over the lines all day, our aeroplanes showed great activity. Observation for our artillery was continued, and many photographs were taken of the enemy's forward and back areas.  
"Four tons of bombs were dropped during the day on German aerodromes north and south of Roulers and near Cambrai, on an important railway centre east of Tournai, and upon billets and hutments round Lens and Roulers. At night an ammunition dump north of Cambrai and rest billets east of Lens were also bombed."

"Three enemy machines were brought down in air fighting, and five were driven down out of control. The pilot of one of the machines brought down on the 23rd inst. proved to be Lieut. Voss, who, it is claimed in the enemy communiqués, has brought down many Allied machines. Four of our aeroplanes are missing."

*General Headquarters, September 26th.*  
"On the 25th inst. our aeroplanes were extremely active, working with our artillery and bombing and taking photographs of the enemy's forward areas and his aerodromes.  
"Most successful bombing raids were carried out during the day on an aerodrome and railway sidings near Ghent, where a large fire was started, on aerodromes near Courtrai and Cambrai, on billets east of Lens, and in hutments south-west of Roulers."

"In all five tons of bombs were dropped in these raids.  
"A further five tons were dropped and many thousand rounds were fired from machine-guns during the night on Menin and Wervicq, and on enemy troops and transport on the roads leading from these towns to the battle front.  
"A great deal of fighting took place yesterday, and a record number of hostile machines were accounted for."

"In air fighting seventeen German aeroplanes were brought down and six were driven down out of control.  
"In addition to these a German three-seater bombing machine was shot down last night by our anti-aircraft guns.  
"One of our machines is missing."

*Admiralty, September 26th.*  
"A bombing raid was carried out by the Royal Naval Air Service at noon on September 25th on Sparappelhoek. Several direct hits were reported, and smoke was observed from sheds on the south-west side of the aerodrome. Many bombs were dropped.  
"During the day our fighter patrols over the fleet encountered six hostile seaplanes, two of which were driven down.  
"A bombardment of the naval establishments at Ostend was carried out by our naval forces during the afternoon, and several hits were observed on the Atelier de la Marine (Naval Workshop)."

*Admiralty, September 27th.*  
"During the night of 25th-26th the Royal Naval Air Service carried out bombing raids on the following objectives: Thourout Junction, Lichtervelde Junction, and Cortemarck Junction. Many tons of bombs were dropped, and several direct hits were made on the lines. All our machines returned safely.  
"A bombing raid was carried out by naval aircraft to-day on St. Denis Westrem aerodrome. Bombs were dropped on sheds and on 15 Gothas lined up on the aerodrome, a direct hit being observed on the latter. All our machines returned safely."

*General Headquarters, September 27th.*  
"On the 26th inst. the weather was misty during the morning, and later in the day was overcast with a strong west wind. In spite of this our aeroplanes were extremely active in co-operation with the artillery and infantry in the battle area. The enemy's troops in the fighting line and his reserves in rear were harassed with machine-gun fire throughout the day. Some 30,000 rounds were fired from altitudes of 100 ft. and upwards, and many parties of German infantry were dispersed with casualties. On one occasion three of the enemy's guns were fired on while in movement. The teams of two guns bolted and the third overturned. Strong opposition was encountered from the enemy's fighting machines, and a very large number of combats took place at low altitudes. Heavy casualties on both sides resulted, owing to the difficulty of regaining control of damaged machines when flying near the ground. The weather prevented any extensive bombing operations during the day, but at night over two tons of bombs were dropped on the enemy's reserves in rear of the battle front. Seven hostile machines were brought down in air fighting, and three were driven down out of control. Five other hostile machines were brought down by the fire of our infantry. Thirteen of our machines are missing."

*War Office, September 28th.*  
"Salonica.—Our aeroplanes have carried out several successful bombing raids, causing damage to the enemy's trenches, camps and battery positions."

*General Headquarters, September 28th.*  
"On the 27th inst. heavy ground mist again hindered aerial work. Our aeroplanes continued to co-operate with the artillery, and many hostile areas were reconnoitred and photographed. During the day bombs were dropped by our airmen on the enemy's aerodromes at Camières, St. Denis Westrem, and Gontrode, on billets at Moorslede, and on other targets. At night a total of 65 tons of bombs were dropped on Gontrode Aerodrome, where good results were obtained; on the enemy's railway stations at Rumbek, Menin, Wevelghem and Ledeghem; and on various hostile billets and a dump. In the course of these raids German troops and transport were successfully attacked

by machine-gun fire from low altitudes. In air fighting six German machines were brought down, while three others were driven down out of control. In addition, one hostile machine was shot down by our infantry. One of our aeroplanes is missing."

### French.

*Paris, September 24th.*  
"Enemy aeroplanes last night bombarded the region north of Bar le Duc. Several bombs fell on a group of German prisoners, two of whom were killed and 17 wounded. During the day of September 23rd our pilots brought down six German aeroplanes."

*Paris, September 25th.*  
"Three German aeroplanes were brought down during the day yesterday by our pilots."

"Our aeroplanes carried out various bombardment operations in the day-time yesterday, and in the course of last night 1,000 kilogrammes (one ton) of projectiles were dropped in the course of these expeditions, especially on the railway stations of Cambrai, Luxembourg, Longuyon, Brielle, &c. Several fires broke out in the bombarded buildings."

*Paris, September 26th.*  
"On Tuesday two German machines were brought down after aerial fighting and two others were seriously damaged. The railway stations of Roulers and of Lichtervelde in Belgium, the hutments of Nantillois, the stations of Brielle, Metz-Woippy, &c., have been plentifully bombed by our squadrons."

*Salonica.*—"British and Serbian airmen successfully bombarded enemy cantonments in the neighbourhood of Demirhissar, Doiran, and Nonte."

*Paris, September 28th.*  
"In spite of unfavourable atmospheric conditions, our bombardment squadron during the night abundantly pelted with bombs the aviation grounds of Marville and Mars la Tour, the railway stations of Brielle, Fleville and Romagne-sur-les-Côtes, and the cantonments of Peuvillers and Sivry-sur-Meuse. All the objectives were attained."

### Belgian.

*Havre, September 25th.*  
"Our airmen have been very active during the past two days, and effected several chasing and protection flights."

### Italian.

*Rome, September 24th.*  
"In the morning one of our bombardment squadrons, well escorted, arrived almost by surprise over the railway station of Grahovo in a moment in which intense railway movement was going on, and four tons of bombs were dropped there; in the night an airship, by dropping numerous high explosive bombs, greatly damaged the establishments in the neighbourhood of Podmelec."

"At the same time another airship once again bombarded the numerous enemy troops in the Chiapovano Valley. Two enemy machines brought down by our airmen fell in flames at Cotici (east of S. Martino del Carso) and east of Kal (Bainsizza Plateau)."

*Rome, September 25th.*  
"During the day four tons of high explosive bombs dropped by our airmen caused destruction and conflagrations in the railway establishments and stations of Podberda (Bazza Valley) and Rifemberga (Carso). In the night one of our airships surprised in the Chiapovano Valley intense movement of troops and motor-lorry columns, and dispersed them with a ton of projectiles."

*Rome, September 26th.*  
"In the morning our aeroplanes bombarded the railway establishments of Podberda (Bazza Valley), and in the afternoon those of Prosecco (coastal line). Altogether five tons of bombs were dropped, with results visibly effective."

*Rome, September 27th.*  
"The railway plants at Grahovo and Dottogiano were yesterday the object of attack on the part of our air squadrons, which dropped altogether five tons of bombs. The enemy reaction was very lively. One of our machines is missing. An enemy machine brought down in an aerial combat over Asiago fell in flames in our lines."

### Russian.

*Petrograd, September 24th.*  
"On September 21st, in the Kovel region, our airmen bombarded the enemy rear and stores at Jino, Melnica, and Nugel, dropping about a hundredweight of bombs. Several fires broke out. In the region of the Lower Danube one of our hydroplanes successfully dropped 18 bombs on the enemy's lines."

*Petrograd, September 25th.*  
"On September 22nd our airmen bombarded the enemy's stores in the region of the village Huta Borovenskaia (27 miles north-east of Kovel), and the small town Lubachevo, dropping about four poods (144 lb.) of bombs."

*Petrograd, September 26th.*  
"On September 23rd, in the region of Husiatyn, our pilot Ensign Iantchenko forced down an enemy aeroplane. In the same region our pilots Captain Kozakoff and non-commissioned officer Chirinski attacked four enemy aeroplanes. One of them was brought down by Chirinski, but the machine of the latter was in its turn damaged and put out of action. Captain Kozakoff continued the fight alone and forced the enemy to land in his own lines.  
"In the Baranovitchi region north of the railway, near the village of Polonetchka, an enemy aeroplane set on fire with a burning liquid one of our captive balloons. The observer descended by means of a parachute.  
"In the region of the mouth of the Danube, north-east of the town of Kilia, an enemy aeroplane was captured. Its occupants—an officer and a private—were taken prisoners."

*Petrograd, September 27th.*  
"Baltic Sea.—On September 25th the enemy made several aerial raids in the region of the Gulf of Riga with the object of ascertaining the exact position of our naval forces. The enemy aeroplanes kept themselves beyond the reach of our naval guns and coast batteries."

*Petrograd, September 28th.*  
"Our airmen dropped bombs on the Turkish camps to the west of Kalkit and on Kemon. In the last place explosions were observed."

### German.

*Berlin, September 24th.*  
"Fourteen enemy aeroplanes have been brought down. Lieut. Wuesthoff won his 20th aerial victory."

*Berlin, September 26th.*  
"On land the enemy lost 15 aeroplanes yesterday. First Lieutenant Berthold brought down his 24th adversary in aerial battle."

*Berlin, September 27th.*  
"Seventeen enemy aeroplanes were brought down yesterday."

*Berlin, September 28th.*  
"As the result of successful battle flights during the last few days, 1st Lieut. Berthold brought down his twenty-fifth opponent, Lieut. Wuesthoff his twenty-second, and Lieut. von Bülow his twenty-first. First Lieut. Waldhausen yesterday succeeded in bringing down one aeroplane and two captive balloons."

*Austrian.*  
"Three hostile aeroplanes were shot down by our airmen and as a result of our defensive fire."

*Vienna, September 27th.*  
"Three hostile aeroplanes were shot down by our airmen and as a result of our defensive fire."



# MAGNETO IGNITION.

## II.—THE GENERAL ARRANGEMENT OF H.T. MAGNETOS.

THE use of a spark generated by a magneto machine for igniting the charge in an internal combustion engine is a great deal older than most people imagine. As early as 1870 a German engineer was experimenting with a low tension magneto, and he certainly obtained patents for a magneto electric ignition gear in 1883. Four years later, Bosch commenced the manufacture of what is known as the oscillating armature type of magneto for large, slow-running gas engines.

Some of the earliest motor cars were fitted with low tension magneto electric ignition, but the troubles experienced with it were even worse than those which were a concomitant of the hot tube ignition which won the race for popular favour for a time. Then, improvements having been made, the

fact two coils, one inside the other, the inner one consisting of a comparatively few turns of thick wire, while the other is of finer wire and has a great many turns.

It has been pointed out that if an electric current is sent through a wire it creates a magnetic field in the space surrounding it. This field of influence can not only be utilised to transform a core of iron into a magnet, but it will also cause a current of electricity to flow in another piece of wire brought within its influence.

So if a coil of wire is placed inside another and a current of electricity is sent through one, a current will be caused to flow in the other even although there is no actual connection between the two coils. This is known as mutual induction. Further, if the wire of the second coil is thinner than that of

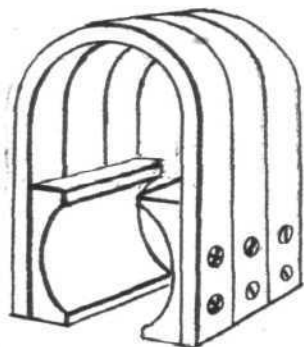


Fig. 7.—The magnets with the pole pieces in position.

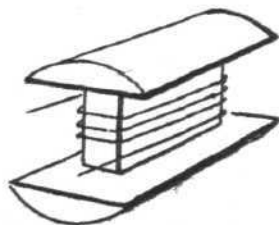


Fig. 8.—The general arrangement of the armature with three turns of the wire arranged on it.

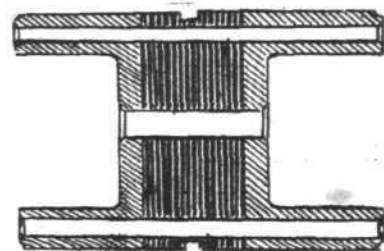


Fig. 9.—A section of the armature showing the laminated centre.

low-tension magneto came into its own again, only to gradually give way and eventually be superseded almost entirely for motors by its high tension rival. In view of the wide-spread use of the high tension magneto nowadays, it is interesting to look back to the time when the relative advantages of the two systems were strenuously debated whenever motorists foregathered, as well as forming a controversial topic which lead to the easy filling of many columns in the correspondence pages of the motor press.

From what has been said in the previous chapter it will be apparent that the two main parts of the magneto are the magnets and the armature. The former, of which in the early types there were as many as six, are usually of the horse-shoe type. Now they rarely exceed three in number, arranged side by side; in some cases two are used, while in a few instances one broad magnet is deemed sufficient. The general arrangement is as shown in Fig. 7, where the soft iron pole pieces are shown in place.

The general shape of the armature, the shuttle or bobbin on which the coil is wound, is seen in Fig. 8. It is not, how-

ever, the first the voltage of the induced current will be higher than in the case of the current generated in the first coil. This fact is taken advantage of by the H.T. magneto and accounts for the two coils.

It is common knowledge that electricity while it is in motion must follow a circuit; if that circuit is broken the pressure of the electricity will mount up, and if it is allowed to become sufficiently high, the current will break its way through the gap in the form of a spark. The current generated by a low tension magneto is not sufficient to jump across the points of a sparking plug, and when magnetos of this type are used for ignition purposes it is necessary to fit a device inside the cylinder which will "break" the circuit and so produce the spark at the precise moment it is required.

Electricity, like everything else when in motion, possesses momentum, which means that it takes a certain period of time to bring it to rest. That is why, if a circuit in which electricity

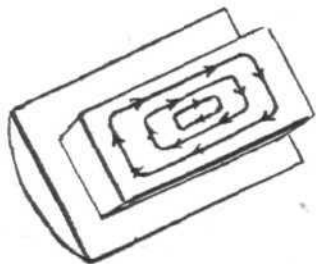


Fig. 10.—Cross section of an armature, showing diagrammatically the eddy currents which would be set up if the armature were solid.

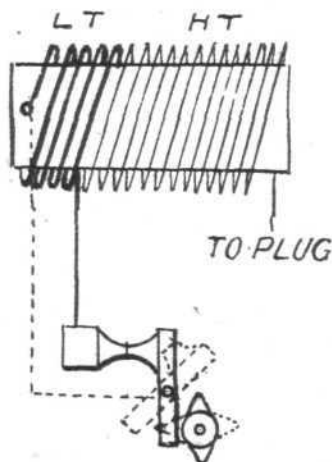


Fig. 11.—Diagram showing the arrangement of the low and high tension coils and the contact breaker, which, by breaking the L.T. circuit, shunts the current into the H.T. coil.

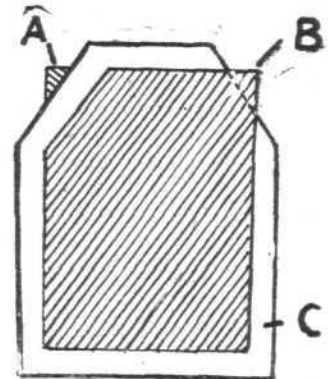


Fig. 12.—The general arrangement of the condenser. A, the overlapping corners of one set of tin-foil sheets; B, the corners of the alternate sheets; C, the insulating material between the sheets.

ever, made in one solid piece, and if it were cut through the centre it would be seen that there were two end-pieces, with the middle portion made up of thin sheet iron stampings or laminations, each one with a coat of varnish to insulate it from the next. This is done because the effect of a solid armature revolving in the magnetic field between the poles would be to set up eddy currents in the iron, as shown in Fig. 9.

On the armature is wound the coil of copper wire covered with silk or other insulating material. There are in point of

fact two coils, one inside the other, the inner one consisting of a comparatively few turns of thick wire, while the other is of finer wire and has a great many turns.

This momentum is utilised in another way to increase the voltage of the H.T. current. Ordinarily the low tension circuit is complete in itself, but it is connected with what is called the low tension contact breaker, a little trigger mechanism which, when the current is at its strongest—about 40 volts—breaks the circuit and so diverts this current into the high tension circuit, where there is a voltage of about 6,000 volts. The result is to force the latter voltage to 10,000

to 15,000 volts, which is sufficient to cause the current to jump across the points of the sparking plug.

Here it may be as well to point out how the armature is fitted up to do its work. Across the ends of the armature are fastened plates carrying spindles which are mounted in bearings in fittings which go across the ends of the pole-pieces. Generally one spindle carries the low tension contact breaker, while on the other is a ring, connected to the high-tension coil, from which the high-tension current is collected and sent to the distributor, a revolving fitting which selects the cylinder in which the spark takes place.

Between this ring and the distributor there is arranged what is termed the "safety gap," which is in effect a safety-valve in case for any reason the electricity should be unable to get across the points of the sparking plug. In that event, the electricity congesting in the wires would set up great heat and be likely to burn away the insulation in parts and thus ruin the magneto. This "safety gap" merely consists of two points—connected to a bye-pass in the circuit—and sufficiently far apart not to allow the current to jump across in the ordinary way.

Another important fitting in the magneto is the condenser, which is arranged in the low-tension circuit. When a circuit is suddenly broken there is a liability for a spark to be formed, and if that were allowed in the contact breaker the great

heat generated would soon burn away the points, rendering them useless. It is the object of the condenser, then, to prevent this, and it does it by absorbing the momentum of the electricity.

Condensers are made of sheets of tinfoil separated by pieces of mica, or paraffined paper. It will be noticed that the pieces of tinfoil are not of regular oblong shape, but have one corner cut off, while the insulators have both corners cut off. Every alternate piece of tinfoil is placed with one corner sticking out on the opposite side to the piece which comes next to it. This is shown in Fig. 12, in which the sheets A have their corners projecting to the left, while the pieces B stick out on the right. If, then, the corners on one side are connected together and those on the other side are likewise connected, it will be seen that there is the equivalent of two large sheets of tinfoil, separated by an insulator connected to the circuit. The result is that when the circuit is suddenly broken the electricity, seeking another way round, takes what seems a promising "short cut" into the tinfoil, where its momentum is expended in charging the sheets. As soon as the sheets of tinfoil are charged, the arrival of more and more electricity simply adds to the resistance, acting very much in the same way as the buffer stops in a railway terminus do in bringing a slow-moving train to rest.

(To be continued.)

## MR. ASQUITH ON THE AIR SERVICES.

OPENING, at the Leeds Town Hall, on September 27th, the Air Services Exhibition organised by the Countess Drogheda, Mr. Asquith, who had an enthusiastic reception, said he was sure that those who attended the exhibition would agree with him that it was of absorbing interest. "As you go round you will be able to trace little by little, and one after another, the steps, often the slow and stumbling steps, by which man has achieved, or, at any rate, is achieving the conquest of the air."

He was sure that as they traced that process on the walls and among the exhibits they would be as strongly impressed with the foresight and pains, the skilful arrangement and organisation which Lady Drogheda had brought to bear on her task, and which enabled him to say—without any suspicion of flattery or exaggeration—the exhibition was one of the most remarkable contributions of women's work made to the service of the war.

"I am old enough to remember," continued Mr. Asquith, "the days when ballooning was considered to be a decidedly dangerous and eccentric pastime. But the type of aircraft which still goes by that generic name has now become, as we all know, an indispensable part of the apparatus of war. I say nothing of the Zeppelin. Save, perhaps, for scouting purposes, it has turned out to be, in my opinion, a costly failure. But the captive balloon—the sausage, as soldiers call it—is an invaluable adjunct in these days to any considerable fighting force."

"Only a week ago I was somewhere between Ypres and Messines Ridge, and I saw in the air some twelve or fifteen of these captive balloons, all making their observations at different altitudes, heavily shelled at times, though unsuccessfully, by the Germans, and each protected in case of disaster by a parachute. It was a wonderful sight."

Even more remarkable had been the rapid development of the aeroplane. The Duke of Wellington was once asked what had been his greatest difficulty as a General, and he said: "I have spent most of my life in trying to find out what was going on on the other side of the hill." Those who commanded armies to-day had no such anxiety, because the aeroplane, with its photographic apparatus, and its wireless, and its capacity to soar to tremendous heights, disclosed and reproduced for the information of the General and his Staff every feature and contour and of the disposition of the enemy.

Equally important, if not more important, in these days of artillery warfare, was the service which the aeroplane rendered to the guns, which, with its aid, were able to aim with miraculous precision at absolutely invisible targets, and from almost inconceivable ranges. In fact it was no exaggeration to say that the Air Service had become the eyes of the Army, and to a large extent also the Navy.

There were other forms of aerial activity upon which he need not dwell, and which to those of them who lived in London had become familiar. The raids did not alarm them in the least, as they had confidence in the powers of our airmen and of our defences to keep the raiders at bay.

"You cannot visit such an exhibition," he concluded, "without feeling profound and fervent admiration for the gallant men who are risking their lives every day and night in that most hazardous service, and to those whose skill and devotion the Army and Navy, and the country and Empire also, owes an immeasurable debt of gratitude."

The Lord Mayor of Leeds presided at the function, and expressed the hope that the attendance would surpass the record of another city where between seven and eight thousand persons paid to see the exhibition in one day.

## SIDE-WINDS.

At a recent meeting of local manufacturers in the country an important scheme was unfolded by Mr. W. H. Healey, Chairman of the local Federation of Manufacturers. It appears that through the enterprise of Mr. G. Holt Thomas a new company, Wycombe Aircraft Constructors, Ltd., has been formed and Mr. F. H. Payne, who has just resigned from the Grahame-White Co., after being joint managing director for two years, has been secured as managing director. It is also announced that Mr. Thomas E. Ritchie, A.M.I.E.E., A.M.I.E.E., has been appointed resident general manager, while Mr. T. Kemp Walton, A.C.I.S., is to be the secretary. Both of these gentlemen are well known for their work in connection with the Grahame-White Co., Ltd.

One effect of the scheme will be that the proposal to withdraw 25 per cent. of the workmen from the district in question for work in other parts will not now be necessary, while those manufacturers who are well equipped with wood-working machinery will be able to keep it employed to the limit of its capacity. The scheme to which the Marquis of Lincolnshire has given practical help is that the various parts of aeroplanes will be built under sub-contract in the many works in the district and they will then be taken to a

central factory where they will be assembled, and any necessary finishing touches given to them.

It is proposed to have a staff of qualified constructors who will be available for instructing local labour in the technical details of the various branches of the work. Practically all the local manufacturers interested have intimated their willingness to co-operate in the scheme and are supplying details of their equipment, tools, &c., so that everything may be utilised to the best advantage.

Plans are well in hand for getting the scheme under way. In the meantime active steps are being taken to get the manufacturers to begin operations so as to have a goodly stock of parts ready for assembling when the central factory is completed.

In view of the fact that the oxy-acetylene system of welding is not suitable for every type of work, it is important to note that Messrs. Barimar, Ltd., who are constantly extending their activities in the field of welding, are now able to carry out at their works several systems of metal fusion, including the Barimar metallurgical system, oxy-acetylene, oxy-hydrogen, and electric welding and brazing.

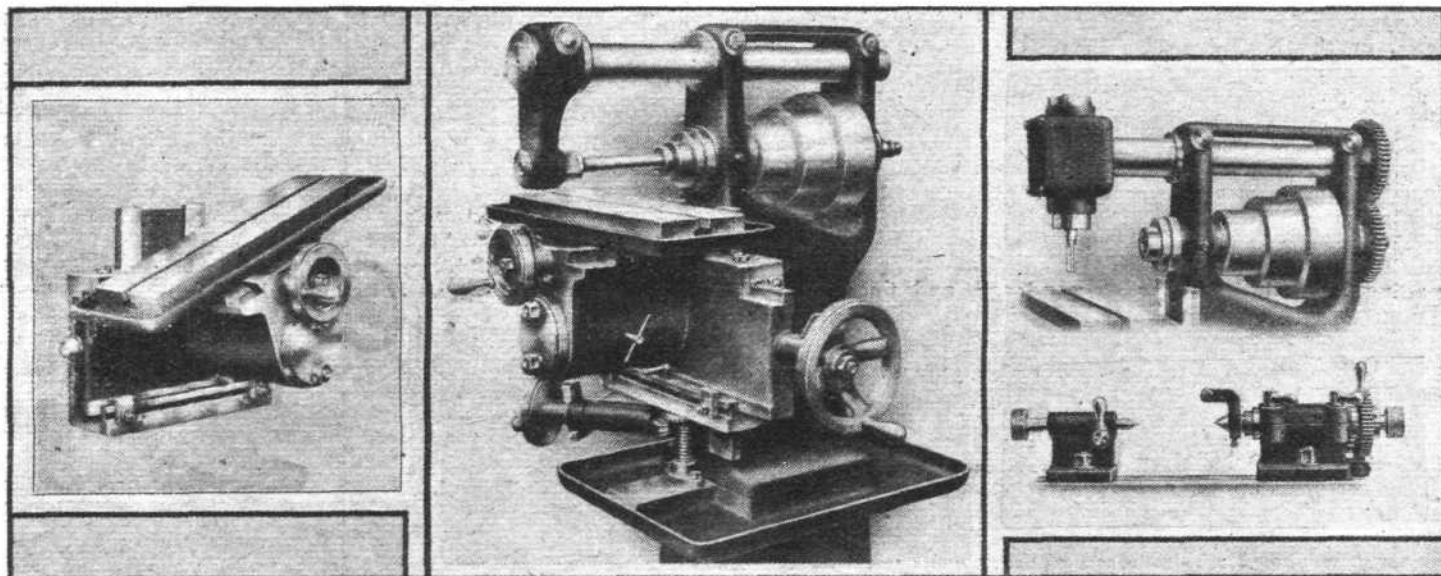


Messrs. Barimar, Ltd., claim that as one or other of their systems is adaptable to every known metallic combination their range of usefulness to the machinery user is the most comprehensive in the world. There is nothing in the way of a breakdown that cannot be quickly and economically dealt with by the Barimar experts at 10, Poland Street, Oxford Street, W. 1.

THE demand for well made and handy machines for tool-room work is a constant one in these days. Aerial activity and progress in aircraft is responsible for new designs, and new designs necessitate small parts of different construction

their new works at Booth Road, Colin Deep Lane, Hendon, are now in full swing under the management of Dr. P. Ewart Bowles, with Mr. E. Gordon Davis, F.I.C., as chief chemist. Orders for "Titanine" dope and other materials in connection with the "Titanine" doping schemes to the southern districts can be delivered promptly and, in many cases, by the firm's motor lorry.

MANY interesting articles have appeared from time to time on American aviators in *La Guerre Aérienne*, and in the issue of September 6th, a page was devoted to a biographical sketch of Mr. Clifford B. Prodger, by Mr. Douglas W.



The "Vilvalle" precision hand-milling machine and its attachments. On the left is seen the swivelling table, while on the right is seen (above) the vertical spindle milling attachment and (below) the fitting for work between centres.

that in turn need new tools. Messrs. W. A. Walber and Co., of 38, Victoria Street, S.W., have just placed on the market their "Vilvalle" precision hand-milling machines, one of which (type 2) is here illustrated. The machine can be had mounted on a column, or plain for fitting on the bench. The graduated swivel table is extremely useful when milling tapers, and can be set to almost any angle with the greatest precision. For vertical spindle milling there is a separate attachment as shown in the pictures, also a fitting for work between centres. An illustrated, explanatory leaflet, giving full particulars, may be obtained from the firm upon application.

THE British Aeroplane Varnish Co., Ltd., announce that

#### An American Trans-Atlantic Flyer.

ACCORDING to a report from New York, the United States Aircraft Production Board is constructing seaplanes which will most likely attempt the Trans-Atlantic voyage.

#### German Aeroplanes in Holland.

FROM Flushing the *Telegraaf* learns that a German aeroplane landed on September 19th near Breskens, in the Province of Zeeland, and that the airmen have been interned.

The following morning a German biplane landed at Axel, but ascended again and disappeared in a southerly direction towards the Belgian frontier.

#### Coming Events Cast their Shadows, &c.

THE *Veчерnee Vremja* on September 27th reported that aerial reconnaissances carried out in the Dvinsk region showed that extensive movements of military trains were in progress on Tuesday at Yalorka railway station.

Information received from other sources confirms the fact that the Germans are preparing an offensive in this region.

#### Double Fatality in Sweden.

Two Swedish military aviators, Lieuts. Baron Blixen Finecke and Baron Pfeiff, were reported on September 27th to have been burned to death at the aerodrome at Malmselett, East Gothland, as the result of an explosion of their motor as they landed.

#### Two 200 Mile Trips by Japanese Airship.

ACCORDING to the Japanese *Aeronautic World* the airship Yuhi of the Japanese Flying Corps on July 21st left Tokorozawa at 6.30 p.m., and passing over Utsunomiya, Shirakawa and Fukushima, reached Sendai at midnight,

Thorburn. We hear it was read with considerable interest by the members of the large and rapidly expanding American staff now organising the U.S.A. Air Service in France.

MESSRS. NAYLOR, BROTHERS, whose offices are at 407, Oxford Street, W. 1, and works at Southall, have had prepared, and are circulating a very neat card for hanging in work shops giving complete instructions for the use of their preparations in the finishing of airscrews. The various fillers, liquids, and varnishes are there set out in rotation, and the method of using fully explained. One or more of these cards will be sent to any responsible firm on receipt of a post card.

having covered 200 miles. She made the return journey the following morning in 63 hours.



At the Cowper-Coles Aircraft Co.'s Annual Outing at Sunbury-on-Thames.—A snap of one of the river launches, the "Sunbury Belle," on which the employees took their trip to Windsor, spending some time there at the Castle and returning in the evening.

## COMPANY MATTERS.

*Re the Wells Aviation Co., Ltd. (in Liquidation).*

ON Tuesday, the 25th ult., a meeting of some of the creditors was held in the above matter at the Cannon Street Hotel, such meeting having been called by Mr. H. M. Marriott, solicitor for Mr. Wells, who was supported by Mr. Gaff, of Messrs. Gaff, Harper and Co. (chartered accountants).

The Chairman (Mr. H. M. Marriott) outlined the reasons for calling this meeting, and, in the course of his speech complained that the liquidators had been guilty of misfeasance, and so, had not acted, in their capacity as liquidators, in the best interests of their creditors; he also complained that the receiver and manager for the debenture holders has not acted in the best interests of the Debenture holder (*i.e.*, the Treasury).

Briefly, the scheme outlined by the chairman was, that Mr. Wells and his associates, had tendered to the liquidators and the receiver for the purchase of the business, and had offered them for the creditors claims a payment down of 6s. 8d. in the £, and had promised to pay a remaining 13s. 4d. in a short time, during which the liquidators would hold a good security to be approved by them on behalf of the creditors. The chairman went into the matter very fully, reading a good deal of correspondence, and finally asked the meeting to support him in passing a resolution to request the liquidators to get rid of the offer, which they had accepted from the Aircraft Trust Company, and Mr. S. J. Waring, whereunder the creditors would get approximately 10s. in the £ (a sum of £15,000 has already been received by the liquidators and which was equivalent to 5s. in the £, and the balance becoming payable shortly would bring the return to the creditors up to approximately 10s. in the £, and which balance has been personally guaranteed by Mr. S. J. Waring).

At the conclusion of the chairman's speech, Mr. George H. Mansfield (The Aircraft Supplies Co., Limited) asked the chairman, "Whether in view of the fact that he was unable to tell the meeting in what form the security for 13s. 4d. would take, he would explain to the meeting, why they should ask the liquidators to throw over the offer they had accepted, the £15,000 they had in their possession, and leave the creditors to negotiate with the scheme now before them." To this the Chairman replied that he had already stated that the 13s. 4d. would be put up on security, which should be approved by the liquidators on behalf of the creditors, and whereby the creditors should get 20s. in the £ instead of the 10s. now before them. A number of creditors rose in turn and requested details as to the nature of the security which had been offered, but each time the chairman was unable to give them any particulars, but informed then that he was not authorised to state whether the security would be in the form of a second debenture or what. Several creditors expressed their dissatisfaction at the inadequate reply of the chairman and also expressed their displeasure at having been called together to receive a proposal which, on the face of it, was not equal to the proposal which had been accepted by the liquidators on behalf of the creditors.

Mr. Davies, the co-liquidator in the matter with Mr. A. G. Westacott, and who had been specifically referred to by the chairman in his speech, rose, and explained the position to the creditors; with regard to the chairman's accusation, Mr. Davies pointed out that he had been in business for twenty-five years, and, not having had such an accusation made against him before, and considering the facts of this case, he would dismiss the remarks without further comment, and leave the creditors to form their own opinion. After giving his explanation on the matter, Mr. Davies pointed out that Mr. Wells and his associates informed him on two or three occasions that they had proposals for the purchase of this business, and the payment of the creditors in full, but had not actually made any concrete proposal to the liquidators.

In reference to the proposal put up by the chairman, Mr. Davies pointed out that in reply to their enquiry as to the length of the period in which the 13s. 4d. would be paid, and also their enquiry as to the nature of the security which was to be put up, they had received no reply. Mr. Davies pointed out that they had had certain negotiations with another party for the purchase of the creditors' claims, but in that instance also nothing had actually matured, while at the time when the last meeting of the committee of creditors was held, they put before them Mr. Waring's definite proposal, and it was unanimously decided by them that this should be accepted by the liquidators, which had been done, and in respect of which £15,000 was standing in the bank in the joint names of Mr. Westacott and himself, while in addition to which, they held Mr. S. J.

Waring's written guarantee for the payment of the balance, *i.e.*, £15,000, and this guarantee Mr. Davies read to the meeting.

After several of the creditors had spoken, and considerable discussion had ensued between these speakers and the chairman, it was proposed and seconded by two different creditors, that a vote of confidence in the liquidators be passed, but difficulty was experienced in getting the chairman to put this to the meeting, and in spite of the demands of creditors to vote, the proposal was not put to the meeting at all; the chairman proposed an amendment approving the alternative scheme before the meeting. The chairman pointed out that he held several proxies, but a solicitor on behalf of some creditors protested against the use of these on the grounds that the people who had given the proxies, had given them merely on the strength of the circular received by them and signed by Mr. H. M. Marriott, and had not had an opportunity of hearing the liquidator's case on the matter at all. The Chairman asked whether there was any creditor who would propose his amendment, and, although a creditor accepted the position of proposer and was eventually seconded by another creditor, the amendment was not put to the meeting, because, after further speeches from other creditors, including the chairman of the committee, and amidst calls to vote upon the substantive proposal, the chairman still would not put the resolution of confidence in the liquidators to the meeting, the meeting under these conditions breaking up without anything definite being put to the meeting. Although no vote was actually taken or any resolution was actually put to the meeting, the sense of the creditors present appeared to be in favour of the first resolution proposed, *viz.*, that a vote of confidence in the liquidators be recorded. Mr. Davies had previously informed the meeting that it was hoped that, under the offer already accepted, a distribution of 5s. in the £ would be made to the creditors in the first week of October, in spite of there being as many as 640 claims.

### NEW COMPANIES REGISTERED.

MANCHESTER AIRCRAFT CO., LTD., 29, Cooper Street, Manchester.—Capital £5,000, in £1 shares. Manufacturers, carriers, importers and exporters of aircraft, parts and accessories, &c.

ROE GREEN GARDEN VILLAGE, LTD.—Capital £10,000, in £1 shares. Acquiring for development certain freehold land, formerly part of Grove Park Estate, Kingsbury, Middlesex. Under agreement with the Aircraft Manufacturing Co., Ltd. First directors: G. H. Thomas, H. Burroughes and G. A. Peck.

### Aeronautical Patents Published.

Applied for in 1916.

The numbers in brackets are those under which the specifications are printed and abridged, &c.

Published October 4th, 1917.

- |         |  |   |            |
|---------|--|---|------------|
| 10,994. | W. M. SAVOURS.                             | Temporary hangers.  | (109,279.) |
| 13,850. | A. H. BRUNESSAUX AND G. IREDALE.           | Apparatus for bomb dropping.  | (109,327.) |
| 15,282. | H. B. MOLESWORTH.                          | Varying the speed of aeroplanes.  | (109,335.) |
| 18,292. | AERONAUTICAL INSTRUMENT CO. AND G. BREWER. | Apparatus for recording differences in pressure between gas contents of aerostat and external atmosphere. | (109,365.) |

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